

APPENDIX I
RISK ASSESSMENT PROCEDURES AND DATA EVALUATION

APPENDIX I **UPDATED HUMAN HEALTH RISK ASSESSMENT**

This section presents an updated human health risk assessment for the residential neighborhood adjacent to the southern property boundary. The purpose of this updated risk assessment was to further evaluate potential impact on human health resulting from the potential exposure to constituents detected in soil vapor samples collected in April and May 2006. In June 2005, GeoSyntec performed a preliminary human health risk assessment using soil vapor samples collected from temporary sample locations within the residential community located south of the site (GeoSyntec, 2005). In April and May 2006, additional soil vapor samples were collected from temporary soil vapor wells within the residential community located south of the site to further evaluate the extent of VOCs in subsurface soil vapor and to update the preliminary human health risk assessment. The approach used in this updated risk assessment followed guidance from the U.S. Environmental Protection Agency (USEPA, 1989), as well as from the California EPA (Cal-EPA, 1999). This updated human health risk assessment was performed by Cathy Villaroman and reviewed by Robert Ettinger of GeoSyntec Consultants, Santa Barbara, California.

I.1 Risk Assessment Approach

Conducting a risk assessment involves identifying Chemicals of Potential Concern (COPCs) (Data Review and Evaluation), evaluating exposure pathways (Exposure Assessment), assessing chemical toxicity (Toxicity Assessment), and subsequently, characterizing risks (Risk Characterization). Estimated human health risks are based on a calculated dose (i.e., amount of chemical intake), which integrates exposure parameters for the receptors of concern (e.g., contact rates, exposure frequency and duration) with chemical-specific toxicity criteria (e.g., reference doses and cancer slope factors) and chemical concentrations. Risk assessments are not intended to estimate the actual cancer risk to an individual but rather the estimated excess lifetime cancer risks (ELCRs) due to the exposure of the COPCs. The ELCRs are then compared to levels considered acceptable for residential scenarios by the San Diego County Department of Environmental Health (DEH), as well as by the USEPA and Cal-EPA's Department of Toxic Substances Control (DTSC). According to DTSC and the DEH, the acceptable ELCR for residential scenarios is one additional case of cancer per 1,000,000 people. Typically this level is called 1 in a million, or mathematically expressed as 1×10^{-6} . When discussed herein, the estimated potential ELCR and potential noncancer hazard are based on potential exposure to the constituents detected in soil vapor samples collected along the southern site boundary, and offsite samples collected beneath Dehia Street, El Mar Avenue, Mirando Street, Acton Avenue, Silla Street, Los Olivos Avenue, and Sunset View Road during April and May 2006. For the purpose of the updated risk

assessment, the potential risks are estimated based on a current offsite residential land-use scenario.

Risk assessments are not intended to predict the actual risk to human receptors. Instead, they provide a qualitative evaluation of the potential exposure pathways and adverse effects on human health that could result from coming into contact with chemicals detected at a site. They could also provide upper-bound (reasonable maximum) estimates of risk with an adequate margin of safety, according to USEPA guidelines (1989), for the protection of virtually all receptors that may potentially come into contact with the COPCs at a site.

Site-specific data were used in the risk assessment whenever possible. This approach is consistent with the guidance issued by the USEPA Risk Assessment Council stressing the use of site-specific data to evaluate potential health risks (1989). However, when site-specific data are lacking or incomplete, the evaluation follows professional judgment, conservative assumptions (i.e., health-protective assumptions that generally overestimate risk), and the best available science.

I.2 Data Review and Evaluation

The focus of the risk assessment was to evaluate potential human health risks associated with VOCs that were detected in soil vapor samples collected in April and May 2006 and their potential migration from the subsurface into indoor air.

The April and May 2006 soil vapor survey involved collecting 9 soil vapor samples along the southern property boundary of the landfill at depths ranging from five to ten feet below the projected elevations of the foundations of the adjoining residences. The April and May 2006 soil vapor survey also involved collecting 27 offsite soil vapor samples at depths of 5 and 10 feet bgs beneath Dehia Street, El Mar Avenue, Mirando Street, Acton Avenue, Silla Street, Los Olivos Avenue, and Sunset View Road in the residential area south of the site. One or two soil vapor samples were collected from each soil vapor boring. The analytical results obtained during the April and May 2006 soil vapor survey using EPA Method TO-15 are summarized in **Table I-1**. Additionally, seven soil samples were collected to characterize the physical properties (e.g., bulk density, total porosity, air filled porosity, total organic carbon, and moisture content) of soil in the areas where the soil vapor survey was performed (GeoSyntec, 2004b and 2005b). The soil physical properties data collected at the southern property boundary and within Dehia Street are summarized in **Table I-2**. A description of the soil vapor sampling procedures is included in **Appendix A**, and copies of the soil vapor sample collection logs are provided in **Appendix D**. A complete description of the geology and hydrogeology of the Poway Landfill, as well as a detailed description of well locations, surveys, and drilling data are available in Sections 2 and 3 of this report.

I.2.1 Chemicals of Potential Concern

Typically, not all chemicals detected pose a human health risk or contribute significantly to overall risks. USEPA guidelines (1989) recommend focusing on a group of chemicals based on inherent toxicity, site concentration, and behavior of the chemicals in the environment. Chemicals that were detected in the soil vapor samples collected along the southern site boundary or in the adjoining offsite area south of the site were considered COPCs. Because these chemicals are volatile, the potential exists for human exposures via inhalation of vapors migrating from the subsurface into an above-ground structure. Therefore, indoor air exposures were evaluated for VOCs detected in soil vapor samples collected along the southern property boundary and the offsite area generally extended south to Mirando Street, east to Acton Avenue, and west to Silver View Road.

I.3 Exposure Assessment

The objectives of an exposure assessment are to identify receptor populations that may be exposed to chemicals migrating from a site, the exposure pathway, and the route of potential intake (Section I.3.1). In addition, for pathways considered complete, the chemical concentrations to which the receptors are potentially exposed (Exposure Point Concentrations in Section I.3.2) and the frequency, magnitude, and duration of these potential exposures (Exposure Parameters in Section I.3.3) need to be estimated. The model that was used to evaluate the potentially complete exposure pathway is discussed in Section I.3.2 and also in Section I.3.4, with the model input parameters summarized in **Table I-3**.

The steps taken in an exposure assessment, integrating exposure parameters for the receptors of concern (e.g., contact rates, exposure frequency and duration) with exposure point concentrations, yield an estimate of chemical intake (i.e., a calculated dose), which is discussed in Section I.3.5. Chemical intake is subsequently used in conjunction with chemical-specific toxicity values (e.g., reference doses and slope factors in Section I.4) to evaluate potential risks for the receptors (Risk Characterization in Section I.5). The uncertainties associated with a risk assessment are discussed in Section I.6 to assist decision-makers in evaluating the results in the context of the assumptions and variability in the data used.

I.3.1 Potentially Complete Exposure Pathway

Current offsite residents located north of Mirando Street and south of the southern property boundary of the site were the receptor population evaluated in this updated risk assessment. Due to their proximity to the site, these receptors were identified to determine the likelihood and extent of their potential exposure to COPCs. The only complete exposure pathway evaluated quantitatively in this risk assessment is inhalation of indoor air volatiles emanating from the subsurface. Evaluating this exposure scenario should also be protective for other, short-time visitors near the site.

I.3.2 Exposure Point Concentrations and Model Approach

Potential migration of soil vapor COPCs into indoor air was estimated using the Johnson and Ettinger (J&E, 1991 and Cal-EPA, 2005) subsurface vapor intrusion model to estimate potential migration of subsurface vapors into indoor air. The J&E computer spreadsheet model is public domain software that is freely available at the USEPA internet website. The J&E model accounts for the diffusion of chemicals through the subsurface, the advection of chemicals through soil and concrete slabs due to pressure differentials between the soil and buildings, and the mixing in indoor air caused by heating and ventilation systems. It also incorporates two different types of building foundation construction: (1) slab on grade; and (2) structures with basements.

The J&E vapor intrusion model may be applied using soil vapor concentration data. Therefore, concentrations (with the exception of 1,3-butadiene) of chemicals detected in each soil vapor sample were used as exposure point concentrations (EPCs) in the quantitative evaluation of potential risk for offsite residents (**Table I-1**). Only two soil vapor sample locations (VW-13 and VW-14) contained a detectable concentration of 1,3-butadiene. 1,3-butadiene has not been detected in landfill gas samples from the Poway Landfill, in vapor samples collected from soil vapor wells at the site, or in other samples collected from other offsite vapor wells. Furthermore, vapor wells VW-13 and -14 are located approximately 1,000 feet southwest of the site and therefore, the landfill does not appear to be the source of 1,3-butadiene. Vapor wells VW-13 and -14 were resampled on 1 June 2006 to determine if the detections of 1,3-butadiene are anomalous. 1,3-Butadiene was not detected in the soil vapor samples collected from soil vapor wells VW-13 and -14 during the 1 June 2006 sampling event. Therefore, for this updated risk assessment, 1,3-butadiene was not included as a COPC.

USEPA recommends using the 95% upper confidence limit (UCL95) of the arithmetic mean as the appropriate estimate of the average concentration for the COPCs detected (USEPA, 1992). Therefore, for comparison to the potential risks estimated for each vapor well, a UCL95 concentration was calculated for each COPC using vapor well

data collected in 2006 (excluding 1,3-butadiene). These UCL95 concentrations were used as site-wide EPCs to estimate a potential site-wide risk.

As an initial step, the analytical data were evaluated to establish the type of distributional assumption that best fits the data. To make this determination, the ProUCL version 3.0 software program provided by USEPA (2004a) was used to evaluate the soil vapor data. This program allows users to test the normality or lognormality of the data using the Shapiro-Wilk W-test; the default is to test for normality. ProUCL computes the relevant test statistic and the associated critical value and then makes a recommendation on the UCL95 value based on the type of distribution (normal, lognormal, or gamma). For data distributions that are neither normal nor lognormal, the UCL95 concentration is calculated using non-parametric methods. The UCL95 concentrations are listed in **Table I-6** with the ProUCL output files presented in **Attachment A** at the end of this **Appendix**.

I.3.3 Exposure Parameters

A primary objective of this updated risk assessment is to use conservative exposure parameters provided by USEPA, DTSC, and DEH so as not to underestimate potential human health risks.

This updated risk assessment evaluates exposures to carcinogenic and noncarcinogenic COPCs. Exposure is estimated separately for assessing potential cancer risk versus noncancer hazard. The averaging time for noncancer effects is the same as the exposure duration in years (multiplied by 365 days), whereas for cancer effects the averaging time is equivalent to an average lifetime of 70 years (USEPA, 1989). The exposure parameters used in this updated risk assessment (USEPA, 1991 and 1997) to estimate potential cancer risk and noncancer hazard for residents located south of the site are presented in the following table:

Table of Exposure Parameters

Exposure Parameters	Child Resident Parameter Values	Adult Resident Parameter Values
Inhalation Rate, IR (m^3/day)	10	20
Exposure Frequency, EF (days/year)	350	350
Exposure Duration, ED (years)	6	24

Body Weight, BW (kilogram)	15	70
Averaging Time, AT cancer (days)	25,550	25,550
Averaging Time, AT noncancer (days)	ED x 365 = 2,190	ED x 365 = 8,760

Potential cancer risks for residents south of the site were estimated using an age-adjusted approach to account for the higher exposures per body weight that occur during childhood. For example, children and adults have different inhalation rates in their first 30 years of life. To integrate their exposures, the resident in this updated risk assessment is assumed to be a child for the first 6 years of exposure, and an adult for the remaining 24 years (USEPA, 1991).

I.3.4 Model Input Parameters

Site-specific soil physical parameters (e.g., soil bulk density, total soil porosity, and water-filled soil porosity) along with applicable physical-chemical information that influence fate and transport are used for modeling whenever possible. However, if site-specific data are lacking, professional judgment and default values that have been developed in order to be conservative and protective of human health and the environment are used, as referenced.

The site-specific soil physical parameters are summarized in **Table I-2**, with the average of the physical properties also presented in **Table I-2**. These parameters were used in the vapor models to assess the vapor intrusion pathway into indoor air. Other model input parameters used in the J&E model, such as building specifications, are presented in **Table I-3**. The soil vapor sampling depth at which the COPC concentrations were detected was used in the model. Thus, for COPCs detected in 5-foot samples collected from offsite vapor wells, a sampling depth of 5 feet bgs (152 centimeters), along with the average soil physical properties collected in the top 5 feet, were used in the model. A Q_{soil} value of 5 liters/min was used to represent the flow rate of chemicals from directly below the building into indoor air. Due to the uncertainty associated with vapor permeability rates directly beneath a building, the use of a Q_{soil} value in the range of 1 to 10 liters/min has been recommended by USEPA with a recommended default assumption of 5 liters/min. A residential default value of 0.5 air exchanges per hour was used in the model (Cal-EPA, 2005).

The predicted indoor air concentrations from the model were used as EPCs in the estimation of potential risk and hazard. The J&E model spreadsheets including the model inputs, intermediate calculations, and predicted indoor air concentrations are presented in

Attachment A. The J&E model spreadsheets are used only to estimate indoor air concentrations and not to estimate potential risk. The approach used to estimate potential risk for the vapor intrusion pathway is described below.

I.3.5 Estimating Chemical Intake via Indoor Air Inhalation

The exposure assessment quantifies the magnitude, frequency, and duration of chemical intake (daily intake) by receptor populations. ADD or “Lifetime Average Daily Dose” (LADD) of COPCS for each exposure pathway are estimated. ADDs and LADDs are calculated using guidelines in the Risk Assessment Guidance for Superfund (USEPA, 1989), Exposure Factors Handbook (USEPA, 1997), site-specific information, and professional judgment, as appropriate.

Daily intakes are calculated as being either ADDS or LADDs, depending on whether the chemical under consideration is a carcinogen or a noncarcinogen: LADDs are estimated for carcinogens and ADDs are estimated for noncarcinogens (USEPA, 1989). They differ primarily in the length of time over which the effects of the chemical are assumed to be averaged.

ADDS and LADDs are expressed as the amount of a substance taken into the body per unit body weight per time, or mg/kg-day. The LADD is averaged over a lifetime (70 years) for carcinogens, and the ADD is averaged over the expected exposure duration for noncarcinogens. The duration of exposure is assumed to vary depending on whether exposure occurs to a working population or residential population. LADDs and ADDs are calculated from the concentration of the chemical at the exposure point, the exposure frequency (i.e., number of times during a week or year), the exposure duration (i.e., the number of days, weeks, or years the exposure persists), and the physical characteristics of the receptor (such as body weight).

For the indoor air pathway, model-predicted indoor air concentrations (C_a) from shallow soil gas were used in the following intake equation:

$$\text{ADD or LADD} = \frac{C_a \times IR \times EF \times ED}{BW \times AT}$$

Where:

C_a = model-predicted indoor air concentration from soil gas (mg/m³)

Under a residential exposure scenario, potential cancer risks are estimated using an age-adjusted factor for the indoor air inhalation pathway, since inhalation rates are

different for children and adults in their first 30 years of life. The following is an equation used to estimate the age-adjusted inhalation factor:

$$\text{InhF}_{\text{adj}} = (\text{ED}_c \times \text{IR}_c / \text{BW}_c) + (\text{ED}_a \times \text{IR}_a / \text{BW}_a)$$

Where:

InhF_{adj} = age-adjusted inhalation factor ($\text{m}^3\text{-year/kg-day}$)

a = adult exposure parameter

c = child exposure parameter

The InhF_{adj} is used in the following equation to calculate the LADDs and ADDs of COPCs via indoor inhalation of vapors:

$$\text{ADD}_{\text{adj}} \text{ or } \text{LADD}_{\text{adj}} = \frac{\text{C}_a \times \text{InhF}_{\text{adj}} \times \text{EF}}{\text{AT}}$$

The exposure parameters that were used to estimate COPC intake via indoor inhalation of vapors from soil gas are provided in the table presented in Section H.3.3 above. The detailed risk calculation spreadsheets are presented in **Attachment A**.

I.4 Toxicity Assessment

The toxicity assessment characterizes the relationship between the magnitude of exposure to a COPC and the nature and magnitude of adverse health effects that may result from such exposure. For purposes of calculating exposure criteria to be used in risk assessments, adverse health effects are classified into two broad categories - noncarcinogens and carcinogens. Toxicity values/exposure criteria are generally developed based on the threshold approach for noncancer effects and the nonthreshold approach for cancer effects. Toxicity values may be based on epidemiological studies, short-term human studies, subchronic or chronic animal data.

I.4.1 Toxicity Criteria

Key dose-response criteria include: unit risk factors (URFs in $[\mu\text{g}/\text{m}^3]^{-1}$) and cancer slope factors (CSFs in $[\text{mg}/\text{kg-day}]^{-1}$) for estimating potential cancer risks from exposure to carcinogens, and reference concentrations (RfCs in mg/m^3) and reference doses (RfDs in $\text{mg}/\text{kg-day}$) for estimating hazard from exposure to noncarcinogens (**Table I-4**). In addition, Cal-EPA has developed chronic Reference Exposure Levels for

noncancer effects, which were used in place of RfCs, if available. In this risk assessment, chronic toxicity criteria were selected (in order of preference) from the following sources:

- 1) Cal-EPA OEHHA Toxicity Criteria Database, online (2006);
- 2) USEPA's (2006) Integrated Risk Information System (IRIS); or
- 3) USEPA Region IX Preliminary Remedial Goals (PRG) table (2004b).

Toxicity criteria used in this risk assessment are presented in **Table I-4**.

I.5 Risk Characterization

The risk characterization process integrates the quantitative and qualitative results of the data evaluation, exposure and toxicity assessments. The purpose is to estimate the likelihood, incidence, and magnitude of the potential adverse health effects to defined receptor populations that may occur as a result of potential exposures to COPCs.

I.5.1 Cancer Risk

Potential cancer risk is defined as the upper-bound, incremental or excess probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen. To evaluate cancer risk from simultaneous exposure to several carcinogens, USEPA guidance assumes that incremental cancer risks are additive. The cumulative cancer risk resulting from exposure to the specific COPCs is estimated by summing the risks estimated for each COPC. This value is then compared to the San Diego County DEH and the DTSC target risk goal of one theoretical excess cancer in a human population of one million (1×10^{-6}). USEPA (1989) states that cancer risks estimated using this approach are upper-bound estimates, which means, that the actual risk is likely to be less than the predicted risk. Moreover, any potential increase in cancer risk from exposure to COPCs detected in the soil vapor samples used for this assessment is in addition to a background risk of Americans developing cancer. The background risk is one chance in three (0.3 or 3×10^{-1}) for every American female, and one chance in two (0.5 or 5×10^{-1}) for every American male, of eventually developing cancer (ACS, 2002).

I.5.2 Noncancer Hazard

The potential for adverse noncancer effects resulting from exposure to COPCs is expressed as the hazard quotient (HQ). The HQ is a comparison of the average daily intake (or average daily dose, ADD) of the chemical (in mg/kg-day) to a chemical-specific reference dose (RfD in mg/kg-day). To assess the overall potential for adverse

health effects posed by exposure to multiple chemicals, the HQs for each COPC associated with a given exposure pathway are summed, resulting in what is referred to by the USEPA (1989) as the hazard index (HI).

The HI is then compared to the DEH and DTSC benchmark level of 1. Implicit in the HI is the assumption of a threshold level of exposure below which no adverse effects are expected to occur. For example, if the daily intake exceeds the RfD (i.e., HI is greater than 1), site-specific exposure exceeds the RfD, then the potential for noncancer adverse effects may exist. In contrast, HIs less than 1 indicate that no adverse health effects are expected to occur from exposure to COPCs.

I.5.3 Updated Risk Characterization Results

Chemical-specific, cumulative cancer risks and noncancer HIs were estimated for current offsite residents potentially exposed to chemicals detected in soil vapor samples and volatilizing from the subsurface into a residence. An estimated potential cancer risk less than 1×10^{-6} and an estimated noncancer HI less than 1 indicate that adverse health effects are not of concern. Results of the risk characterization are discussed below. A summary of the potential estimated cancer risk and noncancer hazard for offsite residents potentially exposed to COPCs detected in samples collected from the following: 1) 5-foot offsite vapor wells; 2) 10-foot offsite vapor wells; 3) property boundary vapor wells; and 4) background vapor wells are presented in **Tables I-5a** through **I-5d**, respectively.

The potential risk and hazard estimates assume a resident is exposed 350 days per year for 30 years to indoor air contaminants volatilizing into a residential structure. The conservative nature of the default values (e.g., open crack space, building air exchange rate, and the assumption of no biodegradation or other loss mechanism for the COPCs) likely biases the modeled indoor air concentrations upward. A range of potential risk estimates was developed using the data from each vapor well in the J&E vapor intrusion model. The indoor air modeling results using the J&E model spreadsheets are presented in **Attachment A** to this **Appendix**.

Using the J&E vapor intrusion model and COPC concentrations for each vapor well, the potential cancer risk was estimated to range from 2×10^{-8} to 9×10^{-7} , while the noncancer hazard was estimated to range from 0.001 to 0.05 for a child resident (**Tables I-5a** through **I-5d**). The primary constituent contributing to the potential cancer risk estimate is tetrachloroethene (PCE), with a chemical-specific risk of 7×10^{-7} . The maximum concentration of PCE (88 ppbv) was detected at 10 feet bgs in offsite vapor well VW-4B. The estimated potential cancer risk and noncancer hazard for each vapor well were below the target risk of 10^{-6} and the benchmark level of 1, respectively.

For comparison, a site-wide potential risk was estimated using 95% upper confidence limit (UCL95) concentrations as the EPCs. Using the J&E vapor intrusion model and UCL95 EPCs, the potential cancer risk was estimated at 1×10^{-6} , which does not exceed the target risk goal of 10^{-6} . The estimated noncancer hazard of 0.04 for a child resident was less than the benchmark level of 1 (**Table I-6**)

I.6 Uncertainty Analysis

The methodology used in this risk assessment is consistent with DEH, USEPA and Cal-EPA risk assessment guidance. However, the procedures used in any quantitative risk assessment are conditional estimates given the many assumptions that must be made about exposure and toxicity. Major sources of uncertainty in risk assessment include: (1) natural variability (e.g., differences in body weight or sensitivity in a group of people); (2) incomplete knowledge of basic physical, chemical and biological processes (e.g., the affinity of a chemical for soil, degradation rates); (3) model assumptions used to estimate key inputs (e.g., exposure, dose response models, fate and transport models); and (4) measurement error primarily with respect to sampling and laboratory analysis.

In other words, risk assessments are a management tool for developing conservative estimates of health hazards that overestimate the true risk for potentially exposed populations. As a result, the numerical estimates in a risk assessment (cancer risks or noncancer hazards) have associated uncertainties reflecting the limitations in available knowledge about site concentrations, exposure assumptions (e.g., chronic exposure concentrations, intake rates, frequency of time spent at home), and chemical toxicity.

Site-specific factors, which this assessment incorporates, decrease uncertainty, although uncertainty may persist in even the most site-specific risk assessments due to the inherent uncertainty in the process. However, because the assumptions used tend to be conservative in nature, the estimated risks are likely to exceed the most probable risk posed to potential human receptors.

Some of the most significant elements affecting uncertainty for this risk assessment include:

- The scientific understanding of the toxicity of chemicals can change over time. For example, USEPA is considering modifying the cancer slope factor for trichloroethylene (TCE) that would result in risk estimates up to 67 times higher than the original USEPA slope factor and 57 times higher than the current Cal-EPA slope factor. DEH and Cal-EPA have not adopted this value.

- The vapor model does not consider biodegradation of VOCs migrating through soils. Biodegradation of petroleum compounds (e.g., benzene, a constituent responsible for a portion of the estimated risk) commonly occurs in the vadose zone, limiting the potential vapor intrusion of these constituents. Neglecting this fate mechanism in the evaluation likely results in an over-prediction of potential risk.
- Chemical concentrations are assumed to remain constant over the duration of exposure. No abiotic or biotic degradation mechanisms, which reduce the concentrations of COPCs over time, are assumed to occur. This general assumption of steady-state conditions also applies to sources and chemical release mechanisms and can result in a conservative estimation of long-term exposure concentrations.

I.7 Biographical Sketches

Mr. Robbert Ettinger has over fourteen years of environmental engineering project support, including research, development and direct technical support, to gasoline retail and distribution, petroleum pipeline, petrochemical manufacturing locations and waste sites. Mr. Ettinger is co-author of the Johnson and Ettinger (1991) algorithm for evaluating subsurface contaminant vapor intrusion to indoor air and has conducted field investigations and modeling evaluations on this topic. He also specializes in human health risk assessment, design and implementation of groundwater and soil vapor remediation systems, regulatory negotiation, and risk-based strategy development for environmental liability and business management. He has published articles on chemical vapor intrusion, environmental fate of volatile chemicals, and design considerations for groundwater and soil vapor extraction systems.

Ms. Cathy Villaroman has over 9 years experience in human health risk assessment, environmental site assessment, toxicology, and laboratory research. She has provided technical support (e.g., data analysis/statistics, exposure and toxicity assessments, and environmental fate and transport modeling) on numerous human health risk assessments. Her experience in providing technical support on numerous risk assessments has been useful in developing and negotiating risk-based management strategies for sites with a wide variety of environmental issues. She has evaluated exposures via incidental ingestion, dermal contact, and inhalation to surface water, groundwater, vapor and soil in these risk assessments. Ms. Villaroman has worked on risk assessments under federal and state Superfund programs and local agency oversight for redevelopment projects, for a number of proposed school sites in southern California,

for closed and abandoned disposal sites, for the former Casmalia Hazardous Waste Management Facility federal Superfund site and for the Del Amo federal Superfund site.

Tables:

- Table I-1 Summary of Soil Vapor Sample Analytical Results**
Table I-2 Summary of Soil Physical Properties
Table I-3 Summary of Risk Assessment Model Input Parameters
Table I-4 Chronic Toxicity Criteria
Table I-5aSummary of Cancer Risk and Noncancer Hazard, Offsite Vapor wells, 5 ft bgs
Table I-5bSummary of Cancer Risk and Noncancer Hazard, Offsite Vapor wells, 10 ft bgs
Table I-5c Summary of Cancer Risk and Noncancer Hazard, Property Boundary Vapor Wells
Table I-5dSummary of Cancer Risk and Noncancer Hazard, Background Vapor Wells
Table I-6 Summary of Cancer Risk and Noncancer Hazard, Site-Wide UCL95

Attachments:

- Attachment A Detailed Risk Calculations, per Vapor Well**
Detailed Risk Calculations, Site-Wide UCL95
Johnson & Ettinger Vapor Model Spreadsheets
ProUCL Output Spreadsheets

References:

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Table I-1
Summary of Soil Vapor Sample Analytical Results
Poway Landfill
Poway, California

Analyte	Units	CAS #	Off-Site Vapor Wells																Off-Site Vapor Wells							
			VW-1A	VW-1A	VW-1B	VW-1B	VW-2A	VW-2A	VW-3A	VW-3A	VW-4A	VW-4A	VW-4B	VW-4B	VW-5A	VW-5A	VW-6A	VW-6A	VW-7A	VW-7A	VW-8A	VW-8A	VW-8B	VW-8B		
			4/20/2006	5/8/2006	4/20/2006	5/9/2006	4/20/2006	5/9/2006	4/20/2006	5/9/2006	4/24/2006	5/9/2006	4/24/2006	5/9/2006	5/9/2006	5/10/2006	5/10/2006	4/24/2006	5/10/2006	4/24/2006	5/9/2006	4/24/2006	5/9/2006	4/25/2006	5/9/2006	
Fixed Gases																										
Oxygen	%	7782-44-7	-	16	-	16	-	17	-	15	14	14	12	12	-	-	16	-	18	17	18	17	18	17	17	
Nitrogen	%	7727-37-9	-	79	-	79	-	79	-	79	80	79	80	79	-	-	82	-	78	79	78	79	78	79	79	
Carbon Monoxide	%	630-08-0	-	ND<0.024	-	ND<0.024	-	ND<0.023	-	ND<0.024	ND<0.023	ND<0.024	ND<0.022	ND<0.023	-	-	ND<0.024	-	ND<0.022	ND<0.024	ND<0.022	ND<0.023	ND<0.022	ND<0.023	ND<0.023	
Methane	%	74-82-8	-	ND<0.00024	-	ND<0.00024	-	ND<0.00023	-	ND<0.00024	ND<0.00023	ND<0.00024	ND<0.00022	ND<0.00023	-	-	ND<0.00024	-	ND<0.00022	ND<0.00024	ND<0.00022	ND<0.00023	ND<0.00022	ND<0.00023	ND<0.00023	
Carbon Dioxide	%	124-38-9	-	4.6	-	5.2	-	3.8	-	6	6.2	6.5	8.5	8.8	-	-	1.6	-	3.6	3.8	3.7	3.8	3.7	3.8	3.8	
Helium	%	7440-59-7	-	0.03	-	0.033	-	0.033	-	ND<0.024	ND<0.023	0.032	ND<0.022	0.028	-	-	ND<0.024	-	ND<0.022	0.03	ND<0.022	0.03	ND<0.022	0.03	ND<0.022	0.03
Volatile Organic Compounds																										
1,1,1-Trichloroethane	PPBV	71-55-6	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1		
1,1,2,2-Tetrachloroethane	PPBV	79-34-5	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1		
1,1,2-Trichloroethane	PPBV	79-00-5	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1		
1,1-Dichloroethane	PPBV	75-34-3	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1		
1,1-Dichloroethene	PPBV	75-35-4	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1		
1,2,4-Trichlorobenzene	PPBV	120-82-1	ND<20	ND<4.8	ND<4.8	ND<4.6	ND<4.7	ND<4.5	ND<4.8	ND<4.7	ND<4.8	ND<4.5	ND<4.6	ND<4.7	ND<4.9	ND<4.8	ND<4.7	ND<4.4	ND<4.8	ND<4.5	ND<4.6	ND<4.4	ND<4.5	ND<4.6		
1,2,4-Trimethylbenzene	PPBV	95-63-6	9.8	8.8	5.3	ND<1.2	15	ND<1.2	1.6	ND<1.2	ND<1.2	ND<1.2	3.5	2.3	ND<1.2	2	1.7	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1		
1,2-Dibromoethane (EDB)	PPBV	106-93-4	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1			
1,2-Dichlorobenzene	PPBV	95-50-1	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1			
1,2-Dichloroethane	PPBV	107-06-2	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1			
1,2-Dichloropropane	PPBV	78-87-5	ND<4.9	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1			
1,3,5-Trimethylbenzene	PPBV	108-67-8	12	2.8	2.4	ND<1.2	6.5	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	1.4	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1		
1,3-Butadiene	PPBV	106-99-0	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1			
1,3-Dichlorobenzene	PPBV	541-73-1	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1				
1,4-Dichlorobenzene	PPBV	106-46-7	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1				
1,4-Dioxane	PPBV	123-91-1	ND<20	ND<4.8	ND<4.8	ND<4.6	ND<4.7	ND<4.5	ND<4.8	ND<4.7																

Table I-1
Summary of Soil Vapor Sample Analytical Results
Poway Landfill
Poway, California

Analyte	Units	CAS #	Off-Site Vapor Wells																Off-Site Vapor Wells						
			VW-1A	VW-1A	VW-1B	VW-1B	VW-2A	VW-2A	VW-3A	VW-3A	VW-4A	VW-4A	VW-4B	VW-4B	VW-5A	VW-5A	VW-6A	VW-6A	VW-7A	VW-7A	VW-8A	VW-8A	VW-8B	VW-8B	
			4/20/2006	5/8/2006	4/20/2006	5/9/2006	4/20/2006	5/9/2006	4/20/2006	5/9/2006	4/24/2006	5/9/2006	4/24/2006	5/9/2006	5/9/2006	5/10/2006	4/24/2006	5/10/2006	4/24/2006	5/9/2006	4/24/2006	5/9/2006	4/25/2006	5/9/2006	
Chloroform	PPBV	67-66-3	ND<4.9	1.6	4	4.1	4.7	4.1	44	30	ND<1.2	ND<1.2	ND<1.1	ND<1.1	1.3	ND<1.2	22	7.7	4.4	3.8	4.9	4.9			
Chloromethane	PPBV	74-87-3	ND<20	ND<4.8	ND<4.8	ND<4.6	ND<4.7	ND<4.5	ND<4.8	ND<4.7	ND<4.8	ND<4.5	ND<4.6	ND<4.7	ND<4.9	ND<4.8	ND<4.7	ND<4.4	ND<4.8	ND<4.5	ND<4.5	ND<4.6			
cis	PPBV	156-59-2	ND<4.9	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	
cis-1,3-Dichloropropene	PPBV	10061-01-5	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	
Cumene	PPBV	98-82-8	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	
Cyclohexane	PPBV	110-82-7	5	ND<1.2	6.4	ND<1.2	8.6	ND<1.2	1.7	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	1.3	3.4	1.7	ND<1.2	1.7	ND<1.1	ND<1.1	ND<1.1	ND<1.1	
Dibromochloromethane	PPBV	124-48-1	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	
Ethanol	PPBV	64-17-5	ND<20	6.1	ND<4.8	ND<4.8	ND<4.6	ND<4.7	ND<4.5	ND<4.8	9.9	9.5	ND<4.5	ND<4.6	ND<4.7	ND<4.9	ND<4.8	ND<4.7	ND<4.4	ND<4.8	ND<4.5	9.7			
Ethyl Benzene	PPBV	100-41-4	67	ND<1.2	15	ND<1.2	18	ND<1.2	1.6	ND<1.2	ND<1.2	ND<1.2	4.1	2.3	ND<1.2	2.7	2.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	
Freon 11	PPBV	75-69-4	ND<4.9	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	
Freon 113	PPBV	76-13-1	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.2	1.8	2.2	4.3	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	
Freon 114	PPBV	76-14-2	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	
Freon 12	PPBV	75-71-8	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	1.4	1.7	2.6	3	4.3	1.3	ND<1.2	ND<1.2	1.4	1.4	1.3	1.5			
Heptane	PPBV	142-82-5	ND<4.9	ND<1.2	4.3	ND<1.2	3.7	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	
Hexachlorobutadiene	PPBV	87-68-3	ND<20	ND<4.8	ND<4.8	ND<4.6	ND<4.7	ND<4.5	ND<4.8	ND<4.7	ND<4.8	ND<4.5	ND<4.6	ND<4.7	ND<4.9	ND<4.8	ND<4.7	ND<4.4	ND<4.8	ND<4.5	ND<4.6				
Hexane	PPBV	110-54-3	ND<4.9	ND<1.2	4.7	ND<1.2	2.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	2.6	ND<1.1	ND<1.2	4.9	2.9	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	
Iodomethane	PPBV	74-88-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
m,p-Xylene	PPBV	106-42-3	150	8	45	2.2	49	1.2	4.1	ND<1.2	2.1	ND<1.2	16	6.3	ND<1.2	8.7	4.6	1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	
Methyl tert-butyl ether	PPBV	1634-04-4	ND<4.9	ND<1.2	ND<1.2	1.4	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	
Methylene Chloride	PPBV	75-09-2	ND<4.9	ND<1.2	1.4	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	5.1	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	
o-Xylene	PPBV	95-47-6	84	5.1	19	ND<1.2	26	ND<1.2	2	ND<1.2	1.5	ND<1.2	5	2.7	ND<1.2	4.1	2.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	
Propylbenzene	PPBV	103-65-1	ND<4.9	ND<1.2	ND<1.2	ND<1.2	1.8	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1		
Styrene	PPBV	100-42-5	ND<4.9	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.2	ND<1.1	ND<1.1		
Tetrachloroethene	PPBV	127-18-4	ND<4.9	ND<1.2	3.3	3.3	4.1	2.5	ND<1.1	ND<1.2	51	5													

Table I-1
Summary of Soil Vapor Sample Analytical Results
Poway Landfill
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Analyte	Units	CAS #	Off-Site Vapor Wells							Background Soil Vapor Wells				Property Boundary Soil Vapor Wells												
			VW-10	VW-10	VW-11	VW-11	VW-12	VW-13	VW-14	PVP-5	PVP-5	PVP-6	PVP-6	PVP-1A	PVP-1A	PVP-2A	PVP-3A	PVP-3A	PVP-3B	PVP-3B	PVP-4A	PVP-4A	PVP-4A	PVP-4A		
			4/25/2006	5/10/2006	4/25/2006	5/10/2006	5/10/2006	5/10/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006		
Fixed Gases																										
Oxygen	%	7782-44-7	18	-	17	-	-	-	-	21	21	18	19	20	19	19	21	21	19	17	20	20	20	20	20	
Nitrogen	%	7727-37-9	78	-	79	-	-	-	-	78	78	79	79	78	79	78	78	78	78	80	79	79	79	79	79	
Carbon Monoxide	%	630-08-0	ND<0.022	-	ND<0.022	-	-	-	-	ND<0.025	ND<0.022	ND<0.023	ND<0.025	ND<0.026	ND<0.026	ND<0.023	ND<0.026	ND<0.024	ND<0.023	ND<0.025	ND<0.024	ND<0.024	ND<0.024	ND<0.024	ND<0.024	
Methane	%	74-82-8	ND<0.00022	-	ND<0.00022	-	-	-	-	ND<0.00025	ND<0.00022	ND<0.00023	ND<0.00025	ND<0.00026	ND<0.00026	ND<0.00023	ND<0.00026	ND<0.00024	ND<0.00024	ND<0.00025	ND<0.00024	ND<0.00024	ND<0.00024	ND<0.00024	ND<0.00024	
Carbon Dioxide	%	124-38-9	3.8	-	3.8	-	-	-	-	0.54	0.44	2.5	2.4	1.7	2.1	2.2	0.81	0.81	2.7	2.6	1.1	1.1	1.1	1.1	1.1	
Helium	%	7440-59-7	0.06	-	0.091	-	-	-	-	ND<0.025	0.29	0.047	ND<0.025	ND<0.026	ND<0.026	ND<0.023	ND<0.026	ND<0.024	0.027	ND<0.025	ND<0.024	ND<0.024	ND<0.024	ND<0.024	ND<0.024	ND<0.024
Volatile Organic Compounds																										
1,1,1-Trichloroethane	PPBV	71-55-6	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2		
1,1,2,2-Tetrachloroethane	PPBV	79-34-5	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,1,2-Trichloroethane	PPBV	79-00-5	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,1-Dichloroethane	PPBV	75-34-3	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,1-Dichloroethene	PPBV	75-35-4	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,2,4-Trichlorobenzene	PPBV	120-82-1	ND<4.4	ND<4.5	ND<4.4	ND<4.5	ND<4.8	ND<4.8	ND<5.1	ND<5.1	ND<4.5	ND<4.6	ND<4.9	ND<5.2	ND<4.6	ND<5.3	ND<4.8	ND<4.7	ND<5.1	ND<4.6	ND<4.8	ND<4.7	ND<5.1	ND<4.6	ND<4.8	
1,2,4-Trimethylbenzene	PPBV	95-63-6	ND<1.1	2.3	ND<1.1	12	ND<1.2	ND<1.2	5.1	3.4	3.8	4.6	3.8	1.5	1.6	2.8	6.4	3.1	8.3	3.9	1.5	1.6				
1,2-Dibromoethane (EDB)	PPBV	106-93-4	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,2-Dichlorobenzene	PPBV	95-50-1	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	26	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,2-Dichloroethane	PPBV	107-06-2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,2-Dichloropropane	PPBV	78-87-5	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,3,5-Trimethylbenzene	PPBV	108-67-8	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	2.1	3.1	2	1.4	1.6	ND<1.3	ND<1.3	1.3	4.1	3.2	5	4.3	ND<1.1	1.8				
1,3-Butadiene	PPBV	106-99-0	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	16	10	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2
1,3-Dichlorobenzene	PPBV	541-73-1	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2	
1,4-Dichlorobenzene	PPBV	106-46-7	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	3.9	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3										

Table I-1
Summary of Soil Vapor Sample Analytical Results
Poway Landfill
Poway, California

Analyte	Units	CAS #	Off-Site Vapor Wells							Background Soil Vapor Wells				Property Boundary Soil Vapor Wells											
			VW-10	VW-10	VW-11	VW-11	VW-12	VW-13	VW-14	PVP-5	PVP-5	PVP-6	PVP-6	PVP-1A	PVP-1A	PVP-2A	PVP-3A	PVP-3A	PVP-3B	PVP-3B	PVP-4A	PVP-4A	PVP-4A		
			4/25/2006	5/10/2006	4/25/2006	5/10/2006	5/10/2006	5/10/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/19/2006	5/8/2006	4/20/2006	5/8/2006		
Chloroform	PPBV	67-66-3	26	14	2.7	2.6	ND<1.2	2.3	1.7	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.3	1.4	ND<1.2	ND<1.3	ND<1.1	ND<1.1	2.9		
Chloromethane	PPBV	74-87-3	ND<4.4	ND<4.5	ND<4.4	ND<4.5	ND<4.8	ND<4.8	ND<5.1	ND<5.1	ND<4.5	ND<4.6	ND<4.9	ND<5.2	ND<4.6	ND<5.3	ND<4.8	ND<4.7	ND<5.1	ND<4.6	ND<4.8				
cis-1,2-Dichloroethene	PPBV	156-59-2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2			
cis-1,3-Dichloropropene	PPBV	10061-01-5	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2			
Cumene	PPBV	98-82-8	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2			
Cyclohexane	PPBV	110-82-7	ND<1.1	1.9	2.5	ND<1.1	ND<1.2	9	2.1	5.1	ND<1.1	ND<1.1	ND<1.2	24	ND<1.3	ND<1.1	ND<1.3	ND<1.2	3.6	5.7	6.7	ND<1.2			
Dibromochloromethane	PPBV	124-48-1	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	1.6				
Ethanol	PPBV	64-17-5	ND<4.4	ND<4.5	ND<4.4	ND<4.5	11	ND<4.8	ND<5.1	12	26	5.6	31	6.9	9.6	ND<4.6	7.6	50	14	ND<5.1	ND<4.6	8.3			
Ethyl Benzene	PPBV	100-41-4	ND<1.1	1.6	3	3	ND<1.2	2.7	ND<1.3	ND<1.3	ND<1.1	1.5	ND<1.2	ND<1.3	ND<1.3	1.1	3.3	3.1	5.6	5.1	ND<1.1	1.9			
Freon 11	PPBV	75-69-4	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	2.7	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	1.6	ND<1.3	ND<1.2	1.6	1.4	ND<1.1	ND<1.2			
Freon 113	PPBV	76-13-1	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.1	14	ND<1.2	6.2	ND<1.3	ND<1.1	ND<1.1	ND<1.2	34	33	290	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2		
Freon 114	PPBV	76-14-2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	12	11	9.2	ND<1.3	ND<1.2	4.5	4.3	ND<1.1	ND<1.2			
Freon 12	PPBV	75-71-8	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.1	17	1.3	14	ND<1.3	ND<1.1	ND<1.1	ND<1.2	58	56	93	1.6	1.6	68	73	14	13		
Heptane	PPBV	142-82-5	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	2.5	ND<1.1	ND<1.1	ND<1.2	7.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	4.4	3.1	4	ND<1.2			
Hexachlorobutadiene	PPBV	87-68-3	ND<4.4	ND<4.5	ND<4.4	ND<4.5	ND<4.5	ND<4.8	ND<4.8	ND<5.1	ND<5.1	ND<4.5	ND<4.6	ND<4.9	ND<5.2	ND<5.2	ND<4.6	ND<5.3	ND<4.8	ND<4.7	ND<5.1	ND<4.6	ND<4.8		
Hexane	PPBV	110-54-3	ND<1.1	2.5	1.9	ND<1.1	ND<1.2	11	4	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	2.1	ND<1.1	ND<1.3	ND<1.2	1.9	2.2	ND<1.1	ND<1.2			
Iodomethane	PPBV	74-88-4	ND	ND<	ND	ND<	ND<	ND<	ND<	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
m,p-Xylene	PPBV	106-42-3	1.2	6.6	3.4	11	1.5	4.2	1.9	2.6	3.5	3.5	3.5	1.6	2.3	3.9	8.1	5.3	12	8.3	1.6	2.6			
Methyl tert-butyl ether	PPBV	1634-04-4	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2			
Methylene Chloride	PPBV	75-09-2	ND<1.1	5.7	ND<1.1	ND<1.1	ND<1.2	1.9	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	13	13	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	1.5	ND<1.2			
o-Xylene	PPBV	95-47-6	ND<1.1	ND<1.1	3.4	6.7	3.4	2.9	1.4	ND<1.3	2.1	1.2	1.4	ND<1.3	ND<1.3	2.5	7.4	6.1	11	12	1.2	2			
Propylbenzene	PPBV	103-65-1	ND<1.1	ND<1.1	ND<1.1	1.4	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	ND<1.1	ND<1.2			
Styrene	PPBV	100-42-5	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	ND<1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	2.2	ND<1.3	1.4	1.6				
Tetrachloroethene	PPBV	127-18-4	ND<1.1	ND<1.1	ND<1.1	ND<1.1	4.3	2.6	1.4	ND<1.3	1.2	ND<1.1	1.2	1.8	2.1	3.6	ND<1.3	4.2	5.6	3.8	3.2	3.4			
Tetrahydrofuran	PPBV	109-99-9	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.2	ND<1.2	ND<1.3	ND<1.3	1.1	ND<1.1	ND<1.2	ND<1.3	ND<1.1	ND<1.3	ND<1.2	ND<1.2	ND<1.3	1.3	ND<1.1	ND<1.2			
Toluene	PPBV	108-88-3	ND<1.1	ND<1.1	7	6.4	ND<1.2	15	5.7	4.5	3.1</														

Table I-2
Summary of Soil Physical Properties
Poway Landfill
Poway, California

Sample ID	Sample Depth (feet bgs)	Total Organic Carbon, TOC (mg/kg)	Fraction Organic Carbon, foc (unitless)	Moisture Content (% wt)	Bulk Density (g/cm ³)	Porosity (%)			Hydraulic Conductivity (cm/s)
						Total	Water-Filled	Air-Filled	
B-1	8	710	0.0007	6.2	1.74	36.2	10.8	25.4	3.2E-04
B-2	10	1050	0.0011	6.9	1.75	35.6	12.4	23.2	1.7E-04
B-3	16	990	0.0010	7.4	1.78	34.5	13.2	21.3	1.3E-04
S6-11	5	720	0.0007	10.0	1.70	36.8	17.0	19.8	1.5E-06
S6-12	5	1100	0.0011	7.8	1.78	33.9	13.9	20.0	5.6E-06
S6-13	1	1350	0.0014	8.6	1.73	35.8	14.9	21.0	3.6E-06
S6-15	5	990	0.0010	5.3	1.59	40.4	8.5	31.9	6.9E-05
Average Stratum A =		987	0.0010	7.5	1.72	36.2	12.9	23.2	9.9E-05

foc = TOC/10⁶

% wt - Percent by weight

g/cm³ - grams per cubic centimeter

mg/kg - milligrams per kilogram

cm/s - Centimeters per second

Table I-3
Summary of Risk Assessment Model Input Parameters
Poway Landfill
Poway, California

Model Input Parameter	Value Used	Rationale
<i>Soil Properties</i>		
Average Soil Temperature, °C	19	Area-Specific Value
<i>Average for the top 5 feet</i>		
Soil dry bulk density, gm/cm ³	1.70	Average Site-Specific Value based on soil physical property testing
Soil total porosity, unitless	0.367	Average Site-Specific Value based on soil physical property testing
Soil water-filled porosity, cm ³ /cm ³	0.136	Average Site-Specific Value based on soil physical property testing
Soil air-filled porosity, cm ³ /cm ³	0.232	Average Site-Specific Value based on soil physical property testing
<i>Average for the top 8 feet</i>		
Soil dry bulk density, gm/cm ³	1.71	Average Site-Specific Value based on soil physical property testing
Soil total porosity, unitless	0.366	Average Site-Specific Value based on soil physical property testing
Soil water-filled porosity, cm ³ /cm ³	0.130	Average Site-Specific Value based on soil physical property testing
Soil air-filled porosity, cm ³ /cm ³	0.236	Average Site-Specific Value based on soil physical property testing
<i>Average for the top 10 feet</i>		
Soil dry bulk density, gm/cm ³	1.71	Average Site-Specific Value based on soil physical property testing
Soil total porosity, unitless	0.365	Average Site-Specific Value based on soil physical property testing
Soil water-filled porosity, cm ³ /cm ³	0.129	Average Site-Specific Value based on soil physical property testing
Soil air-filled porosity, cm ³ /cm ³	0.235	Average Site-Specific Value based on soil physical property testing
<i>J&E Model Parameters</i>		
Depth below grade to bottom of enclosed space floor (L _F), cm	15	Slab construction
Soil vapor sampling depth below grade (L _s), cm	--	Assume the depth at which the samples were collected
Thickness of soil stratum A (h _A), cm	L _s	Equal to the soil vapor sampling depth, L _s
Soil stratum A SCS soil type	S	Default model assumption
Enclosed space floor thickness (L _{crack}), cm	10	Default model assumption
Soil-building pressure differential, g/cm·sec ²	40	Default model assumption
Enclosed space floor length (L _B), cm	1000	Default residential building dimension
Enclosed space floor width (W _B), cm	1000	Default residential building dimension
Enclosed space height (H _B), cm	244	Default residential building dimension for slab-on-grade, 8 feet
Floor-wall seam crack width (w), cm	0.1	Default model assumption
Indoor air exchange rate (ER), hour ⁻¹	0.5	50th percentile from comprehensive US study (Cal-EPA, 2005)
Average vapor flow rate into building (Q _{soil}), L/m	5	Default residential assumption (Cal-EPA, 2005)

Table I-4
Chronic Toxicity Criteria
Poway Landfill
Poway, California

GeoSyntec Consultants

COPCs	Cas No.	CSF (mg/kg-day) ⁻¹	URF (ug/m ³) ⁻¹	RfD (mg/kg-day)	RfC/REL (mg/m ³)
1,2,4-Trimethylbenzene	95636	--	--	1.7E-03	6.0E-03
1,2-Dichlorobenzene	95501	--	--	5.7E-02	2.0E-01
1,3,5-Trimethylbenzene	108678	--	--	1.7E-03	6.0E-03
1,3-Butadiene	106990	9.8E-01	2.8E-04	--	--
1,3-Dichlorobenzene	541731	--	--	3.0E-02	1.1E-01
1,4-Dichlorobenzene	106467	3.9E-02	1.1E-05	2.3E-01	8.0E-01
2-Butanone	78933	--	--	1.4E+00	5.0E+00
2-Hexanone	591786	--	--	8.6E-01	3.0E+00
2-Propanol	67630	--	--	2.6E-03	9.1E-03
4-Ethyltoluene	622968	--	--	2.0E-01	7.0E-01
4-Methyl-2-pentanone	108101	--	--	8.6E-01	3.0E+00
Acetone	67641	--	--	9.0E-01	3.2E+00
Benzene	71432	1.0E-01	2.90E-05	1.7E-02	6.0E-02
Bromodichloromethane	75274	1.3E-01	3.71E-05	2.0E-02	7.0E-02
Carbon Disulfide	75150	--	--	2.3E-01	8.0E-01
Chlorobenzene	108907	--	--	2.9E-01	1.0E+00
Chloroform	67663	1.9E-02	5.3E-06	8.6E-02	3.0E-01
Cyclohexane	110827	--	--	1.7E+00	6.0E+00
Dibromochloromethane	124481	9.5E-02	2.7E-05	2.0E-02	7.0E-02
Ethanol	64175	--	--	5.0E-01	1.8E+00
Ethyl Benzene	100414	--	--	5.7E-01	2.0E+00
Freon 11	75694	--	--	2.0E-01	7.0E-01
Freon 113	76131	--	--	8.6E+00	3.0E+01
Freon 114	76142	--	--	8.6E+00	3.0E+01
Freon 12	75718	--	--	5.7E-02	2.0E-01
Heptane	142825	--	--	2.0E+00	7.0E+00
Hexane	110543	--	--	5.7E-02	2.0E-01
Methyl tert-butyl ether	1634044	9.1E-04	2.6E-07	2.3E+00	8.0E+00
Methylene Chloride	75092	3.5E-03	1.0E-06	1.1E-01	4.0E-01
Propylbenzene	103651	--	--	4.0E-02	1.4E-01
Styrene	100425	--	--	2.6E-01	9.0E-01
Tetrachloroethene	127184	2.1E-02	5.9E-06	1.0E-02	3.5E-02
Tetrahydrofuran	109999	6.8E-03	1.9E-06	8.6E-02	3.0E-01
Toluene	108883	--	--	8.6E-02	3.0E-01
Trichloroethene	79016	7.00E-03	2.00E-06	1.7E-01	6.0E-01
m,p-Xylene	106423	--	--	2.0E-01	7.0E-01
o-Xylene	95476	--	--	2.0E-01	7.0E-01

Notes:

COPCs: chemicals of potential concern

CSF: cancer slope factor; URF: unit risk factor

RfD: reference dose; RfC: reference concentration; REL: Reference Exposure Level

Table I-5a
Summary of Cancer Risk and Noncancer Hazard
Offsite Vapor Wells, 5 feet bgs
Poway Landfill

Chemicals of Potential Concern (COPCs)	Cas No.	VW-1A			VW-2A			VW-3A			VW-4A			VW-5A			VW-6A			VW-7A		
		Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI
1,2,4-Trimethylbenzene	95636	9.8	--	1.1E-02	15	--	1.7E-02	1.6	--	1.8E-03	--	--	--	--	--	2	--	2.2E-03	1.7	--	1.9E-03	
1,2-Dichlorobenzene	95501	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,3,5-Trimethylbenzene	108678	12	--	1.3E-02	6.5	--	7.2E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,3-Butadiene	106990	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,3-Dichlorobenzene	541731	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,4-Dichlorobenzene	106467	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2-Butanone	78933	--	--	6.8	--	6.7E-06	1.3	--	1.3E-06	2.1	--	2.1E-06	2.2	--	2.2E-06	4.1	--	4.1E-06	2.5	--	2.5E-06	
2-Hexanone	591786	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2-Propanol	67630	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
4-Ethyltoluene	622968	20	--	1.9E-04	11	--	1.0E-04	--	--	--	--	--	--	--	--	1.4	--	1.3E-05	1.7	--	1.6E-05	
4-Methyl-2-pentanone	108101	--	--	1.9	--	4.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Acetone	67641	8	--	1.3E-05	130	--	2.2E-04	5.7	--	9.6E-06	9	--	1.5E-05	--	--	12	--	2.0E-05	7	--	1.2E-05	
Benzene	71432	--	--	5.9	2.2E-07	5.5E-04	--	--	--	--	--	--	--	--	--	3.8	1.4E-07	3.6E-04	2.6	9.9E-08	2.4E-04	
Bromodichloromethane	75274	--	--	--	--	--	5.6	2.5E-07	4.1E-04	--	--	--	--	--	--	--	--	3.7	1.6E-07	2.7E-04		
Carbon Disulfide	75150	--	--	33	--	2.5E-04	1.4	--	1.1E-05	2.5	--	1.9E-05	12	--	9.2E-05	21	--	1.6E-04	29	--	2.2E-04	
Chlorobenzene	108907	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloroform	67663	1.6	1.9E-08	5.1E-05	4.7	5.6E-08	1.5E-04	44	5.2E-07	1.4E-03	--	--	1.3	1.5E-08	4.2E-05	--	--	22	2.6E-07	7.1E-04		
Cyclohexane	110827	5	--	4.5E-06	8.6	--	7.7E-06	1.7	--	1.5E-06	--	--	--	--	--	--	--	3.4	--	3.0E-06		
Dibromochloromethane	124481	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Ethanol	64175	6.1	--	1.7E-05	--	--	--	--	--	9.9	--	2.8E-05	--	--	--	--	--	--	--	--	--	
Ethyl Benzene	100414	67	--	2.3E-04	18	--	6.2E-05	1.6	--	5.5E-06	--	--	--	--	--	2.7	--	9.3E-06	2.1	--	7.2E-06	
Freon 11	75694	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Freon 113	76131	--	--	--	--	--	--	--	--	--	--	--	4.3	--	1.8E-06	--	--	--	--	--	--	
Freon 114	76142	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Freon 12	75718	--	--	--	--	--	--	--	1.7	--	6.1E-05	4.3	--	1.5E-04	1.3	--	4.6E-05	--	--	--	--	
Heptane	142825	--	--	3.7	--	4.0E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Hexane	110543	--	--	2.1	--	1.1E-04	--	--	--	--	--	--	--	--	--	--	--	4.9	--	2.5E-04		
Methyl tert-butyl ether	1634044	--	--	1.4	6.0E-10	1.2E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Methylene Chloride	75092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.1	8.0E-09	8.6E-05		
Propylbenzene	103651	--	--	1.8	--	8.5E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Styrene	100425	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tetrachloroethene	127184	--	--	4.1	5.9E-08	1.2E-03	--	--	59	8.4E-07	1.8E-02	19	2.7E-07	5.6E-03	6.2	8.8E-08	1.8E-03	3.7	5.3E-08	1.1E-03		
Tetrahydrofuran	109999	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	3.3E-09	2.4E-05	--	--	--	--	
Toluene	108883	1000	--	2.2E-02	44	--	9.7E-04	4.4	--	9.7E-05	3.4	--	7.5E-05	--	--	14	--	3.1E-04	6.3	--	1.4E-04	
Trichloroethene	79016	--	--	--	--	--	--	--	--	--	--	--	1.8	7.4E-09	2.6E-05	--	--	19	7.8E-08	2.8E-04		
m,p-Xylene	106423	150	--	1.5E-03	49	--	4.9E-04	4.1	--	4.1E-05	2.1	--	2.1E-05	--	--	8.7	--	8.7E-05	4.6	--	4.6E-05	
o-Xylene	95476	84	--	9.1E-04	26	--	2.8E-04	2	--	2.2E-05	1.5	--	1.6E-05	--	--	4.1	--	4.5E-05	2.2	--	2.4E-05	

2E-08

5E-02

3E-07

3E-02

8E-07

4E-03

8E-07

2E-02

3E-07

6E-03

2E-07

5E-03

7E-07

5E-03

Notes: Blank cell in EPC column indicates nondetect

EPC: soil vapor exposure point concentration

Table I-5a
Summary of Cancer Risk and Noncancer Hazard
Offsite Vapor Wels, 5 feet bgs
Poway Landfill

Chemicals of Potential Concern (COPCs)	Cas No.	VW-8A			VW-10			VW-11			VW-12			VW-13			VW-14		
		Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI
1,2,4-Trimethylbenzene	95636	--	--	--	2.3	--	2.6E-03	12	--	1.3E-02	--	--	--	--	--	5.1	--	5.7E-03	
1,2-Dichlorobenzene	95501	--	--	--	--	--	--	--	--	--	--	--	--	--	26	--	--	1.2E-03	
1,3,5-Trimethylbenzene	108678	--	--	--	--	--	3.5	--	3.9E-03	--	--	--	--	--	2.1	--	--	2.3E-03	
1,3-Butadiene	106990	--	--	--	--	--	--	--	--	--	--	--	16	--	--	10	--	--	
1,3-Dichlorobenzene	541731	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,4-Dichlorobenzene	106467	--	--	--	--	--	--	--	--	--	--	--	--	--	3.9	8.9E-08	4.4E-05		
2-Butanone	78933	2.8	--	2.8E-06	2	--	2.0E-06	2.5	--	2.5E-06	2.7	--	2.7E-06	1.8	--	1.8E-06	3.4	--	3.4E-06
2-Hexanone	591786	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2-Propanol	67630	--	--	--	--	--	--	--	--	--	--	--	13	--	6.1E-03	--	--	--	
4-Ethyltoluene	622968	--	--	1.4	--	1.3E-05	6.2	--	5.8E-05	--	--	--	--	--	1.3	--	--	1.2E-05	
4-Methyl-2-pentanone	108101	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Acetone	67641	10	--	1.7E-05	4.5	--	7.5E-06	4.8	--	8.0E-06	8.9	--	1.5E-05	7	--	1.2E-05	6.4	--	1.1E-05
Benzene	71432	--	--	2.5	9.5E-08	2.4E-04	1.8	6.9E-08	1.7E-04	--	--	5	1.9E-07	4.7E-04	3.7	1.4E-07	3.5E-04		
Bromodichloromethane	75274	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Carbon Disulfide	75150	1.1	--	8.5E-06	1.9	--	1.5E-05	9.8	--	7.5E-05	1.4	--	1.1E-05	14	--	1.1E-04	4.8	--	3.7E-05
Chlorobenzene	108907	--	--	--	--	--	--	--	--	--	--	--	1.2	--	8.6E-06	--	--	--	
Chloroform	67663	4.4	5.2E-08	1.4E-04	26	3.1E-07	8.4E-04	2.7	3.2E-08	8.7E-05	--	--	2.3	2.7E-08	7.4E-05	1.7	2.0E-08	5.5E-05	
Cyclohexane	110827	1.7	--	1.5E-06	1.9	--	1.7E-06	2.5	--	2.2E-06	--	--	9	--	8.0E-06	2.1	--	1.9E-06	
Dibromochloromethane	124481	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Ethanol	64175	--	--	--	--	--	--	--	--	11	--	3.1E-05	--	--	--	--	--	--	
Ethyl Benzene	100414	--	--	1.6	--	5.5E-06	3	--	1.0E-05	--	--	2.7	--	9.3E-06	--	--	--	--	
Freon 11	75694	--	--	--	--	--	--	--	--	--	--	2.7	--	3.8E-05	--	--	--	--	
Freon 113	76131	--	--	--	--	--	--	--	--	14	--	5.8E-06	--	--	6.2	--	--	2.6E-06	
Freon 114	76142	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Freon 12	75718	1.4	--	5.0E-05	--	--	--	--	--	17	--	6.1E-04	1.3	--	4.6E-05	14	--	5.0E-04	
Heptane	142825	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Hexane	110543	--	--	2.5	--	1.3E-04	1.9	--	9.6E-05	--	--	11	--	5.6E-04	4	--	--	2.0E-04	
Methyl tert-butyl ether	1634044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Methylene Chloride	75092	--	--	5.7	8.9E-09	9.6E-05	--	--	--	--	--	1.9	3.0E-09	3.2E-05	--	--	--	--	
Propylbenzene	103651	--	--	--	--	--	1.4	--	6.6E-05	--	--	--	--	--	--	--	--	--	
Styrene	100425	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tetrachloroethene	127184	2.2	3.1E-08	6.5E-04	--	--	--	--	--	4.3	6.1E-08	1.3E-03	2.6	3.7E-08	7.7E-04	1.4	2.0E-08	4.2E-04	
Tetrahydrofuran	109999	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Toluene	108883	--	--	--	--	--	7	--	1.5E-04	--	--	15	--	3.3E-04	5.7	--	--	1.3E-04	
Trichloroethene	79016	3.7	1.5E-08	5.4E-05	--	--	--	--	--	--	--	4.2	1.7E-08	6.2E-05	3.5	1.4E-08	5.1E-05		
m,p-Xylene	106423	--	--	6.6	--	6.6E-05	11	--	1.1E-04	1.5	--	1.5E-05	4.2	--	4.2E-05	1.9	--	1.9E-05	
o-Xylene	95476	--	--	--	--	--	6.7	--	7.3E-05	3.4	--	3.7E-05	2.9	--	3.2E-05	1.4	--	1.5E-05	
		1E-07	9E-04		4E-07	4E-03		1E-07	2E-02		6E-08	2E-03		3E-07	9E-03		3E-07	1E-02	

Notes: Blank cell in EPC column indicates nondetect

EPC: soil vapor exposure point concentration

Table I-5b
Summary of Cancer Risk and Noncancer Hazard
Offsite Vapor Wells, 10 feet bgs
Poway Landfill

GeoSyntec Consultants

Chemicals of Potential Concern (COPCs)	Cas No.	VW-1B			VW-4B			VW-8B		
		Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI
1,2,4-Trimethylbenzene	95636	5.3	--	3.4E-03	3.5	--	2.3E-03		--	--
1,2-Dichlorobenzene	95501		--	--	1.6	--	4.2E-05		--	--
1,3,5-Trimethylbenzene	108678	2.4	--	1.5E-03	1.4	--	9.0E-04		--	--
1,3-Butadiene	106990		--	--		--	--		--	--
1,3-Dichlorobenzene	541731		--	--	1.6	--	8.1E-05		--	--
1,4-Dichlorobenzene	106467		--	--		--	--		--	--
2-Butanone	78933	3.8	--	2.3E-06	4.1	--	2.4E-06	3.1	--	1.8E-06
2-Hexanone	591786		--	--		--	--		--	--
2-Propanol	67630		--	--	8.2	--	2.3E-03		--	--
4-Ethyltoluene	622968	5.2	--	2.9E-05	2.9	--	1.6E-05		--	--
4-Methyl-2-pentanone	108101		--	--		--	--		--	--
Acetone	67641	35	--	3.7E-05	11	--	1.2E-05	7.7	--	8.2E-06
Benzene	71432	2.9	6.7E-08	1.7E-04	6	1.4E-07	3.4E-04		--	--
Bromodichloromethane	75274		--	--		--	--		--	--
Carbon Disulfide	75150	2.7	--	1.3E-05	13	--	6.2E-05	1.8	--	8.6E-06
Chlorobenzene	108907		--	--		--	--		--	--
Chloroform	67663	4.1	3.0E-08	8.2E-05		--	--	4.9	3.6E-08	9.8E-05
Cyclohexane	110827	6.4	--	3.4E-06		--	--	1.7	--	9.0E-07
Dibromochloromethane	124481		--	--		--	--		--	--
Ethanol	64175		--	--		--	--	9.7	--	1.8E-05
Ethyl Benzene	100414	15	--	3.1E-05	4.1	--	8.4E-06		--	--
Freon 11	75694		--	--		--	--		--	--
Freon 113	76131		--	--	2.2	--	5.4E-07		--	--
Freon 114	76142		--	--		--	--		--	--
Freon 12	75718		--	--	3	--	6.3E-05	1.5	--	3.2E-05
Heptane	142825	4.3	--	2.8E-06		--	--	1.3	--	8.5E-07
Hexane	110543	4.7	--	1.6E-04	2.6	--	9.0E-05		--	--
Methyl tert-butyl ether	1634044		--	--		--	--		--	--
Methylene Chloride	75092	1.4	1.4E-09	1.5E-05		--	--		--	--
Propylbenzene	103651		--	--		--	--		--	--
Styrene	100425		--	--		--	--		--	--
Tetrachloroethene	127184	3.3	2.8E-08	5.8E-04	88	7.5E-07	1.6E-02	1.9	1.6E-08	3.3E-04
Tetrahydrofuran	109999		--	--		--	--		--	--
Toluene	108883	320	--	4.3E-03	23	--	3.1E-04	17	--	2.3E-04
Trichloroethene	79016		--	--	1.5	3.7E-09	1.3E-05		--	--
m,p-Xylene	106423	45	--	2.7E-04	16	--	9.5E-05		--	--
o-Xylene	95476	19	--	1.3E-04	5	--	3.3E-05		--	--
			1E-07	1E-02		9E-07	2E-02		5E-08	7E-04

Notes: Blank cell in EPC column indicates nondetect

EPC: soil vapor exposure point concentration

Table I-5c
Summary of Cancer Risk and Noncancer Hazard
Property Boundary Vapor Wells, 8 feet bgs
Poway Landfill

Chemicals of Potential Concern (COPCs)	Cas No.	PVP-1A			PVP-2A			PVP-3A			PVP-3B			PVP-4A		
		Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI
1,2,4-Trimethylbenzene	95636	1.6	--	1.3E-03	2.8	--	2.2E-03	6.4	--	5.1E-03	8.3	--	6.6E-03	1.6	--	1.3E-03
1,2-Dichlorobenzene	95501		--	--		--	--		--	--		--	--	--	--	--
1,3,5-Trimethylbenzene	108678		--	--	1.3	--	1.0E-03	4.1	--	3.2E-03	5	--	3.9E-03	1.8	--	1.4E-03
1,3-Butadiene	106990		--	--		--	--		--	--		--	--	--	--	--
1,3-Dichlorobenzene	541731		--	--		--	--		--	--		--	--	--	--	--
1,4-Dichlorobenzene	106467		--	--		--	--		--	--		--	--	--	--	--
2-Butanone	78933	54	--	3.9E-05	100	--	7.2E-05	35	--	2.5E-05	110	--	7.9E-05	5.4	--	3.9E-06
2-Hexanone	591786		--	--	5.4	--	8.4E-06		--	--	7.4	--	1.2E-05		--	--
2-Propanol	67630		--	--	21	--	7.1E-03		--	--		--	--	--	--	--
4-Ethyltoluene	622968		--	--	1.6	--	1.1E-05	4.3	--	2.9E-05	5.4	--	3.6E-05	1.5	--	1.0E-05
4-Methyl-2-pentanone	108101		--	--		--	--		--	--		--	--	--	--	--
Acetone	67641	87	--	1.1E-04	46	--	5.8E-05	15	--	1.9E-05	36	--	4.5E-05	11	--	1.4E-05
Benzene	71432		--	--		--	--	1.5	4.2E-08	1.0E-04	7	1.9E-07	4.8E-04		--	--
Bromodichloromethane	75274		--	--		--	--		--	--		--	--	2.3	6.9E-08	1.1E-04
Carbon Disulfide	75150	3.5	--	2.0E-05	11	--	6.3E-05	8.6	--	4.9E-05	130	--	7.4E-04	1.8	--	1.0E-05
Chlorobenzene	108907		--	--		--	--		--	--		--	--	--	--	--
Chloroform	67663		--	--		--	--	1.4	1.2E-08	3.3E-05		--	--	2.9	2.6E-08	6.9E-05
Cyclohexane	110827	24	--	1.5E-05		--	--		--	--	5.7	--	3.7E-06	6.7	--	4.3E-06
Dibromochloromethane	124481		--	--		--	--		--	--		--	--	1.6	3.0E-08	6.8E-05
Ethanol	64175	9.6	--	2.1E-05		--	--	50	--	1.1E-04	14	--	3.1E-05	8.3	--	1.8E-05
Ethyl Benzene	100414		--	--	1.1	--	2.7E-06	3.3	--	8.1E-06	5.6	--	1.4E-05	1.9	--	4.7E-06
Freon 11	75694		--	--	1.6	--	1.6E-05		--	--	1.6	--	1.6E-05		--	--
Freon 113	76131	34	--	1.0E-05	290	--	8.7E-05		--	--		--	--	--	--	--
Freon 114	76142	12	--	3.6E-06	9.2	--	2.7E-06		--	--	4.5	--	1.3E-06		--	--
Freon 12	75718	58	--	1.5E-03	93	--	2.4E-03	1.6	--	4.1E-05	73	--	1.9E-03	14	--	3.6E-04
Heptane	142825	7.2	--	5.6E-06		--	--		--	--	4.4	--	3.4E-06	4	--	3.1E-06
Hexane	110543	2.1	--	8.4E-05		--	--		--	--	2.2	--	8.8E-05		--	--
Methyl tert-butyl ether	1634044		--	--		--	--		--	--		--	--	--	--	--

Table I-5c
Summary of Cancer Risk and Noncancer Hazard
Property Boundary Vapor Wells, 8 feet bgs
Poway Landfill

Chemicals of Potential Concern (COPCs)	Cas No.	PVP-1A			PVP-2A			PVP-3A			PVP-3B			PVP-4A		
		Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI
Methylene Chloride	75092	13	1.5E-08	1.6E-04		--	--		--	--		--	--	1.5	1.7E-09	1.9E-05
Propylbenzene	103651		--	--		--	--		--	--		--	--	--	--	--
Styrene	100425		--	--		--	--		--	--		2.2	--	1.1E-05	1.6	--
Tetrachloroethene	127184	2.1	2.1E-08	4.5E-04	3.6	3.7E-08	7.7E-04	4.2	4.3E-08	8.9E-04	5.6	5.7E-08	1.2E-03	3.4	3.5E-08	7.2E-04
Tetrahydrofuran	109999		--	--		--	--		--	--		1.3	2.4E-09	1.8E-05	--	--
Toluene	108883	7.5	--	1.2E-04	2.1	--	3.4E-05	9.8	--	1.6E-04	14	--	2.2E-04	5	--	8.0E-05
Trichloroethene	79016		--	--		--	--		--	--		--	--	--	--	--
m,p-Xylene	106423	2.3	--	1.7E-05	3.9	--	2.8E-05	8.1	--	5.8E-05	12	--	8.6E-05	2.6	--	1.9E-05
o-Xylene	95476		--	--	2.5	--	2.0E-05	7.4	--	5.9E-05	12	--	9.5E-05	2	--	1.6E-05
			4E-08	4E-03		4E-08	1E-02		1E-07	1E-02		3E-07	2E-02		2E-07	4E-03

Notes:

Blank cell in EPC column indicates nondetect

EPC: soil vapor exposure point concentration

Table I-5d
Summary of Cancer Risk and Noncancer Hazard
Background Vapor Wells, 5 feet bgs
Poway Landfill

GeoSyntec Consultants

Chemicals of Potential Concern (COPCs)	Cas No.	PVP-5			PVP-6		
		Max EPC (ppbv)	Cancer Risk	Noncancer HI	Max EPC (ppbv)	Cancer Risk	Noncancer HI
1,2,4-Trimethylbenzene	95636	3.8	--	4.2E-03	4.6	--	5.1E-03
1,2-Dichlorobenzene	95501		--	--		--	--
1,3,5-Trimethylbenzene	108678	3.1	--	3.4E-03	1.6	--	1.8E-03
1,3-Butadiene	106990		--	--		--	--
1,3-Dichlorobenzene	541731		--	--		--	--
1,4-Dichlorobenzene	106467		--	--		--	--
2-Butanone	78933	6.9	--	6.8E-06	3.4	--	3.4E-06
2-Hexanone	591786		--	--		--	--
2-Propanol	67630		--	--		--	--
4-Ethyltoluene	622968	2.1	--	2.0E-05	1.6	--	1.5E-05
4-Methyl-2-pentanone	108101		--	--		--	--
Acetone	67641	17	--	2.8E-05	9.2	--	1.5E-05
Benzene	71432		--	--		--	--
Bromodichloromethane	75274		--	--	1.4	6.1E-08	1.0E-04
Carbon Disulfide	75150	1.8	--	1.4E-05	1.5	--	1.2E-05
Chlorobenzene	108907		--	--		--	--
Chloroform	67663		--	--		--	--
Cyclohexane	110827	5.1	--	4.6E-06		--	--
Dibromochloromethane	124481		--	--		--	--
Ethanol	64175	26	--	7.4E-05	31	--	8.9E-05
Ethyl Benzene	100414		--	--	1.5	--	5.1E-06
Freon 11	75694		--	--		--	--
Freon 113	76131		--	--		--	--
Freon 114	76142		--	--		--	--
Freon 12	75718		--	--		--	--
Heptane	142825	2.5	--	2.7E-06		--	--
Hexane	110543		--	--		--	--
Methyl tert-butyl ether	1634044		--	--		--	--
Methylene Chloride	75092		--	--		--	--
Propylbenzene	103651		--	--		--	--
Styrene	100425		--	--		--	--
Tetrachloroethene	127184	1.2	1.7E-08	3.6E-04	1.2	1.7E-08	3.6E-04
Tetrahydrofuran	109999	1.1	2.8E-09	2.1E-05		--	--
Toluene	108883	4.5	--	9.9E-05	2.9	--	6.4E-05
Trichloroethene	79016		--	--		--	--
m,p-Xylene	106423	3.5	--	3.5E-05	3.5	--	3.5E-05
o-Xylene	95476	2.1	--	2.3E-05	1.4	--	1.5E-05
			2E-08	8E-03		8E-08	8E-03

Notes: Blank cell in EPC column indicates nondetect

EPC: soil vapor exposure point concentration

Table I-6
Summary of Cancer Risk and Noncancer Hazard
Site-Wide, 5 feet bgs
Poway Landfill

GeoSyntec Consultants

Chemicals of Potential Concern (COPCs)	Cas No.	Site-Wide UCL95		
		UCL95 EPC (ppbv)	Cancer Risk	Noncancer HI
1,2,4-Trimethylbenzene	95636	9.02	--	1.0E-02
1,2-Dichlorobenzene	95501	4.45	--	1.8E-04
1,3,5-Trimethylbenzene	108678	3.46	--	3.3E-03
1,3-Butadiene	106990		--	--
1,3-Dichlorobenzene	541731	0.78	--	6.6E-05
1,4-Dichlorobenzene	106467	0.92	2.1E-08	1.0E-05
2-Butanone	78933	53.84	--	5.3E-05
2-Hexanone	591786	3.28	--	6.5E-06
2-Propanol	67630	6.31	--	2.8E-03
4-Ethyltoluene	622968	8.69	--	8.1E-05
4-Methyl-2-pentanone	108101	0.79	--	1.7E-06
Acetone	67641	58.17	--	9.7E-05
Benzene	71432	3.35	1.1E-07	2.8E-04
Bromodichloromethane	75274	1.79	7.7E-08	1.3E-04
Carbon Disulfide	75150	20.01	--	1.5E-04
Chlorobenzene	108907	0.76	--	5.4E-06
Chloroform	67663	21.76	2.6E-07	7.0E-04
Cyclohexane	110827	9.94	--	8.8E-06
Dibromochloromethane	124481	0.77	2.2E-08	4.9E-05
Ethanol	64175	11.84	--	3.4E-05
Ethyl Benzene	100414	23.15	--	7.9E-05
Freon 11	75694	0.93	--	1.3E-05
Freon 113	76131	91.53	--	3.8E-05
Freon 114	76142	3.83	--	1.6E-06
Freon 12	75718	52.49	--	1.9E-03
Heptane	142825	2.44	--	2.1E-06
Hexane	110543	3.10	--	1.5E-04
Methyl tert-butyl ether	1634044	0.77	3.3E-10	6.8E-07
Methylene Chloride	75092	3.87	6.1E-09	6.5E-05
Propylbenzene	103651	0.81	--	3.8E-05
Styrene	100425	0.87	--	6.2E-06
Tetrachloroethene	127184	43.95	5.9E-07	1.3E-02
Tetrahydrofuran	109999	0.78	2.0E-09	1.5E-05
Toluene	108883	328.95	--	7.2E-03
Trichloroethene	79016	4.02	1.6E-08	5.9E-05
m,p-Xylene	106423	16.49	--	1.6E-04
o-Xylene	95476	30.04	--	3.3E-04
			1E-06	4E-02

Notes:

EPC: soil vapor exposure point concentration

UCL95: 95 percent upper confidence limit of the average soil vapor concentration

Attachment Table A-1
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples

Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-1A		VW-1A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	2.9E-05	1.9E-05	1.7E-03	6.0E-03	1.1E-02	4.3E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	3.5E-05	2.3E-05	1.7E-03	6.0E-03	1.3E-02	5.3E-06	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	--	--	1.4E+00	5.0E+00	--	--	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	5.8E-05	3.7E-05	2.0E-01	7.0E-01	1.9E-04	8.7E-06	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.9E-05	1.2E-05	9.0E-01	3.2E+00	1.3E-05	2.8E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	--	--	2.3E-01	8.0E-01	--	--	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	6.9E-06	4.4E-06	8.6E-02	3.0E-01	5.1E-05	1.0E-06	1.9E-02	1.9E-08
	Cyclohexane	1.2E-05	7.7E-06	1.7E+00	6.0E+00	4.5E-06	1.8E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	1.4E-05	8.7E-06	5.0E-01	1.8E+00	1.7E-05	2.0E-06	--	--
	Ethylbenzene	2.1E-04	1.3E-04	5.7E-01	2.0E+00	2.3E-04	3.1E-05	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	--	--	1.0E-02	3.5E-02	--	--	2.1E-02	--
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	3.0E-03	1.9E-03	8.6E-02	3.0E-01	2.2E-02	4.4E-04	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	4.7E-04	3.0E-04	2.0E-01	7.0E-01	1.5E-03	7.0E-05	--	--
	o-Xylene	2.9E-04	1.8E-04	2.0E-01	7.0E-01	9.1E-04	4.2E-05	--	--
						4.9E-02			1.9E-08

Attachment Table A-2
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples

Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-2A		VW-2A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	4.4E-05	2.8E-05	1.7E-03	6.0E-03	1.7E-02	6.6E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	1.9E-05	1.2E-05	1.7E-03	6.0E-03	7.2E-03	2.9E-06	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	1.5E-05	9.6E-06	1.4E+00	5.0E+00	6.7E-06	2.2E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	3.2E-05	2.0E-05	2.0E-01	7.0E-01	1.0E-04	4.8E-06	--	--
	4-Methyl-2-pentanone	5.5E-06	3.5E-06	8.6E-01	3.0E+00	4.1E-06	8.2E-07	--	--
	Acetone	3.1E-04	2.0E-04	9.0E-01	3.2E+00	2.2E-04	4.6E-05	--	--
	Benzene	1.5E-05	9.5E-06	1.7E-02	6.0E-02	5.5E-04	2.2E-06	1.0E-01	2.2E-07
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	9.1E-05	5.8E-05	2.3E-01	8.0E-01	2.5E-04	1.3E-05	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	2.0E-05	1.3E-05	8.6E-02	3.0E-01	1.5E-04	3.0E-06	1.9E-02	5.6E-08
	Cyclohexane	2.1E-05	1.3E-05	1.7E+00	6.0E+00	7.7E-06	3.1E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	5.5E-05	3.5E-05	5.7E-01	2.0E+00	6.2E-05	8.2E-06	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	1.2E-05	7.9E-06	2.0E+00	7.0E+00	4.0E-06	1.8E-06	--	--
	Hexane	9.5E-06	6.1E-06	5.7E-02	2.0E-01	1.1E-04	1.4E-06	--	--
	Methyl tert-butyl ether	4.4E-06	2.8E-06	2.3E+00	8.0E+00	1.2E-06	6.6E-07	9.1E-04	6.0E-10
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	5.3E-06	3.4E-06	4.0E-02	1.4E-01	8.5E-05	7.9E-07	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	1.9E-05	1.2E-05	1.0E-02	3.5E-02	1.2E-03	2.8E-06	2.1E-02	5.9E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.3E-04	8.3E-05	8.6E-02	3.0E-01	9.7E-04	1.9E-05	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	1.5E-04	9.8E-05	2.0E-01	7.0E-01	4.9E-04	2.3E-05	--	--
	o-Xylene	8.8E-05	5.7E-05	2.0E-01	7.0E-01	2.8E-04	1.3E-05	--	--
						2.8E-02			3.4E-07

Attachment Table A-3
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples

Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-3A		VW-3A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	4.7E-06	3.0E-06	1.7E-03	6.0E-03	1.8E-03	7.1E-07	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	2.9E-06	1.8E-06	1.4E+00	5.0E+00	1.3E-06	4.3E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.3E-05	8.6E-06	9.0E-01	3.2E+00	9.6E-06	2.0E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	1.3E-05	8.1E-06	2.0E-02	7.0E-02	4.1E-04	1.9E-06	1.3E-01	2.5E-07
	Carbon Disulfide	3.8E-06	2.5E-06	2.3E-01	8.0E-01	1.1E-05	5.7E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	1.9E-04	1.2E-04	8.6E-02	3.0E-01	1.4E-03	2.8E-05	1.9E-02	5.2E-07
	Cyclohexane	4.1E-06	2.6E-06	1.7E+00	6.0E+00	1.5E-06	6.1E-07	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	4.9E-06	3.1E-06	5.7E-01	2.0E+00	5.5E-06	7.3E-07	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	--	--	1.0E-02	3.5E-02	--	--	2.1E-02	--
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.3E-05	8.3E-06	8.6E-02	3.0E-01	9.7E-05	1.9E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	1.3E-05	8.2E-06	2.0E-01	7.0E-01	4.1E-05	1.9E-06	--	--
	o-Xylene	6.8E-06	4.3E-06	2.0E-01	7.0E-01	2.2E-05	1.0E-06	--	--
						3.8E-03			7.7E-07

Attachment Table A-4
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-4A		VW-4A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	4.6E-06	3.0E-06	1.4E+00	5.0E+00	2.1E-06	6.9E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.1E-05	1.4E-05	9.0E-01	3.2E+00	1.5E-05	3.2E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	6.9E-06	4.4E-06	2.3E-01	8.0E-01	1.9E-05	1.0E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	2.2E-05	1.4E-05	5.0E-01	1.8E+00	2.8E-05	3.3E-06	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	5.4E-06	3.5E-06	5.7E-02	2.0E-01	6.1E-05	8.1E-07	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	2.7E-04	1.8E-04	1.0E-02	3.5E-02	1.8E-02	4.1E-05	2.1E-02	8.4E-07
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.0E-05	6.4E-06	8.6E-02	3.0E-01	7.5E-05	1.5E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	6.6E-06	4.2E-06	2.0E-01	7.0E-01	2.1E-05	9.7E-07	--	--
	o-Xylene	5.1E-06	3.3E-06	2.0E-01	7.0E-01	1.6E-05	7.6E-07	--	--
						1.8E-02			8.4E-07

Attachment Table A-5
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-5A		VW-5A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	4.9E-06	3.1E-06	1.4E+00	5.0E+00	2.2E-06	7.2E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	--	--	9.0E-01	3.2E+00	--	--	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	3.3E-05	2.1E-05	2.3E-01	8.0E-01	9.2E-05	4.9E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	5.6E-06	3.6E-06	8.6E-02	3.0E-01	4.2E-05	8.3E-07	1.9E-02	1.5E-08
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	2.4E-05	1.5E-05	8.6E+00	3.0E+01	1.8E-06	3.6E-06	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	1.4E-05	8.8E-06	5.7E-02	2.0E-01	1.5E-04	2.0E-06	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	8.8E-05	5.6E-05	1.0E-02	3.5E-02	5.6E-03	1.3E-05	2.1E-02	2.7E-07
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	--	--	8.6E-02	3.0E-01	--	--	--	--
	Trichloroethene	7.1E-06	4.5E-06	1.7E-01	6.0E-01	2.6E-05	1.1E-06	7.0E-03	7.4E-09
	m,p-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
	o-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
						6.0E-03			2.9E-07

Attachment Table A-6
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-6A		VW-6A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	5.9E-06	3.8E-06	1.7E-03	6.0E-03	2.2E-03	8.8E-07	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	9.1E-06	5.8E-06	1.4E+00	5.0E+00	4.1E-06	1.3E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	4.1E-06	2.6E-06	2.0E-01	7.0E-01	1.3E-05	6.1E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.8E-05	1.8E-05	9.0E-01	3.2E+00	2.0E-05	4.2E-06	--	--
	Benzene	9.6E-06	6.1E-06	1.7E-02	6.0E-02	3.6E-04	1.4E-06	1.0E-01	1.4E-07
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	5.8E-05	3.7E-05	2.3E-01	8.0E-01	1.6E-04	8.6E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	8.3E-06	5.3E-06	5.7E-01	2.0E+00	9.3E-06	1.2E-06	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	4.2E-06	2.7E-06	5.7E-02	2.0E-01	4.6E-05	6.2E-07	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	2.9E-05	1.8E-05	1.0E-02	3.5E-02	1.8E-03	4.3E-06	2.1E-02	8.8E-08
	Tetrahydrofuran	3.3E-06	2.1E-06	8.6E-02	3.0E-01	2.4E-05	4.9E-07	6.8E-03	3.3E-09
	Toluene	4.1E-05	2.6E-05	8.6E-02	3.0E-01	3.1E-04	6.1E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	2.7E-05	1.7E-05	2.0E-01	7.0E-01	8.7E-05	4.0E-06	--	--
	o-Xylene	1.4E-05	8.9E-06	2.0E-01	7.0E-01	4.5E-05	2.1E-06	--	--
						5.1E-03			2.4E-07

Attachment Table A-7
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-7A		VW-7A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	5.0E-06	3.2E-06	1.7E-03	6.0E-03	1.9E-03	7.5E-07	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	5.5E-06	3.5E-06	1.4E+00	5.0E+00	2.5E-06	8.2E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	5.0E-06	3.2E-06	2.0E-01	7.0E-01	1.6E-05	7.4E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.7E-05	1.1E-05	9.0E-01	3.2E+00	1.2E-05	2.5E-06	--	--
	Benzene	6.6E-06	4.2E-06	1.7E-02	6.0E-02	2.4E-04	9.8E-07	1.0E-01	9.9E-08
	Bromodichloromethane	8.4E-06	5.4E-06	2.0E-02	7.0E-02	2.7E-04	1.2E-06	1.3E-01	1.6E-07
	Carbon Disulfide	8.0E-05	5.1E-05	2.3E-01	8.0E-01	2.2E-04	1.2E-05	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	9.5E-05	6.1E-05	8.6E-02	3.0E-01	7.1E-04	1.4E-05	1.9E-02	2.6E-07
	Cyclohexane	8.1E-06	5.2E-06	1.7E+00	6.0E+00	3.0E-06	1.2E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	6.4E-06	4.1E-06	5.7E-01	2.0E+00	7.2E-06	9.6E-07	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	2.2E-05	1.4E-05	5.7E-02	2.0E-01	2.5E-04	3.3E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	1.5E-05	9.8E-06	1.1E-01	4.0E-01	8.6E-05	2.3E-06	3.5E-03	8.0E-09
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	1.7E-05	1.1E-05	1.0E-02	3.5E-02	1.1E-03	2.6E-06	2.1E-02	5.3E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.9E-05	1.2E-05	8.6E-02	3.0E-01	1.4E-04	2.8E-06	--	--
	Trichloroethene	7.5E-05	4.8E-05	1.7E-01	6.0E-01	2.8E-04	1.1E-05	7.0E-03	7.8E-08
	m,p-Xylene	1.4E-05	9.2E-06	2.0E-01	7.0E-01	4.6E-05	2.1E-06	--	--
	o-Xylene	7.5E-06	4.8E-06	2.0E-01	7.0E-01	2.4E-05	1.1E-06	--	--
						5.3E-03			6.6E-07

Attachment Table A-8
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-8A		VW-8A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	6.2E-06	4.0E-06	1.4E+00	5.0E+00	2.8E-06	9.2E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.4E-05	1.5E-05	9.0E-01	3.2E+00	1.7E-05	3.5E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	3.0E-06	1.9E-06	2.3E-01	8.0E-01	8.5E-06	4.5E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	1.9E-05	1.2E-05	8.6E-02	3.0E-01	1.4E-04	2.8E-06	1.9E-02	5.2E-08
	Cyclohexane	4.1E-06	2.6E-06	1.7E+00	6.0E+00	1.5E-06	6.1E-07	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	4.5E-06	2.9E-06	5.7E-02	2.0E-01	5.0E-05	6.7E-07	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	1.0E-05	6.5E-06	1.0E-02	3.5E-02	6.5E-04	1.5E-06	2.1E-02	3.1E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	--	--	8.6E-02	3.0E-01	--	--	--	--
	Trichloroethene	1.5E-05	9.3E-06	1.7E-01	6.0E-01	5.4E-05	2.2E-06	7.0E-03	1.5E-08
	m,p-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
	o-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
							9.3E-04		9.9E-08

Attachment Table A-9
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-10		VW-10
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	6.8E-06	4.4E-06	1.7E-03	6.0E-03	2.6E-03	1.0E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	4.4E-06	2.8E-06	1.4E+00	5.0E+00	2.0E-06	6.6E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	4.1E-06	2.6E-06	2.0E-01	7.0E-01	1.3E-05	6.1E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.1E-05	6.8E-06	9.0E-01	3.2E+00	7.5E-06	1.6E-06	--	--
	Benzene	6.3E-06	4.0E-06	1.7E-02	6.0E-02	2.4E-04	9.4E-07	1.0E-01	9.5E-08
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	5.2E-06	3.3E-06	2.3E-01	8.0E-01	1.5E-05	7.8E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	1.1E-04	7.2E-05	8.6E-02	3.0E-01	8.4E-04	1.7E-05	1.9E-02	3.1E-07
	Cyclohexane	4.5E-06	2.9E-06	1.7E+00	6.0E+00	1.7E-06	6.8E-07	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	4.9E-06	3.1E-06	5.7E-01	2.0E+00	5.5E-06	7.3E-07	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	1.1E-05	7.2E-06	5.7E-02	2.0E-01	1.3E-04	1.7E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	1.7E-05	1.1E-05	1.1E-01	4.0E-01	9.6E-05	2.6E-06	3.5E-03	8.9E-09
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	--	--	1.0E-02	3.5E-02	--	--	2.1E-02	--
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	--	--	8.6E-02	3.0E-01	--	--	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	2.1E-05	1.3E-05	2.0E-01	7.0E-01	6.6E-05	3.1E-06	--	--
	o-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
						4.0E-03			4.1E-07

Attachment Table A-10
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-11		VW-11
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	3.6E-05	2.3E-05	1.7E-03	6.0E-03	1.3E-02	5.3E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	1.0E-05	6.6E-06	1.7E-03	6.0E-03	3.9E-03	1.5E-06	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	5.5E-06	3.5E-06	1.4E+00	5.0E+00	2.5E-06	8.2E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	1.8E-05	1.2E-05	2.0E-01	7.0E-01	5.8E-05	2.7E-06	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.1E-05	7.2E-06	9.0E-01	3.2E+00	8.0E-06	1.7E-06	--	--
	Benzene	4.5E-06	2.9E-06	1.7E-02	6.0E-02	1.7E-04	6.8E-07	1.0E-01	6.9E-08
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	2.7E-05	1.7E-05	2.3E-01	8.0E-01	7.5E-05	4.0E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	1.2E-05	7.4E-06	8.6E-02	3.0E-01	8.7E-05	1.7E-06	1.9E-02	3.2E-08
	Cyclohexane	6.0E-06	3.8E-06	1.7E+00	6.0E+00	2.2E-06	8.9E-07	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	9.2E-06	5.9E-06	5.7E-01	2.0E+00	1.0E-05	1.4E-06	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	8.6E-06	5.5E-06	5.7E-02	2.0E-01	9.6E-05	1.3E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	4.1E-06	2.6E-06	4.0E-02	1.4E-01	6.6E-05	6.1E-07	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	--	--	1.0E-02	3.5E-02	--	--	2.1E-02	--
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	2.1E-05	1.3E-05	8.6E-02	3.0E-01	1.5E-04	3.1E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	3.4E-05	2.2E-05	2.0E-01	7.0E-01	1.1E-04	5.1E-06	--	--
	o-Xylene	2.3E-05	1.5E-05	2.0E-01	7.0E-01	7.3E-05	3.4E-06	--	--
						1.8E-02			1.0E-07

Attachment Table A-11
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-12		VW-12
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation									
	VOCs								
	1,2,4-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	6.0E-06	3.8E-06	1.4E+00	5.0E+00	2.7E-06	8.9E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.1E-05	1.3E-05	9.0E-01	3.2E+00	1.5E-05	3.1E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	3.8E-06	2.5E-06	2.3E-01	8.0E-01	1.1E-05	5.7E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	2.5E-05	1.6E-05	5.0E-01	1.8E+00	3.1E-05	3.7E-06	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	7.8E-05	5.0E-05	8.6E+00	3.0E+01	5.8E-06	1.2E-05	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	5.4E-05	3.5E-05	5.7E-02	2.0E-01	6.1E-04	8.1E-06	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	2.0E-05	1.3E-05	1.0E-02	3.5E-02	1.3E-03	3.0E-06	2.1E-02	6.1E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	--	--	8.6E-02	3.0E-01	--	--	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	4.7E-06	3.0E-06	2.0E-01	7.0E-01	1.5E-05	7.0E-07	--	--
	o-Xylene	1.2E-05	7.4E-06	2.0E-01	7.0E-01	3.7E-05	1.7E-06	--	--
						2.0E-03			6.1E-08

Attachment Table A-12
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-13		VW-13
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	4.0E-06	2.5E-06	1.4E+00	5.0E+00	1.8E-06	5.9E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	2.5E-05	1.6E-05	2.6E-03	9.1E-03	6.1E-03	3.7E-06	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.7E-05	1.1E-05	9.0E-01	3.2E+00	1.2E-05	2.5E-06	--	--
	Benzene	1.3E-05	8.1E-06	1.7E-02	6.0E-02	4.7E-04	1.9E-06	1.0E-01	1.9E-07
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	3.8E-05	2.5E-05	2.3E-01	8.0E-01	1.1E-04	5.7E-06	--	--
	Chlorobenzene	3.8E-06	2.4E-06	2.9E-01	1.0E+00	8.6E-06	5.7E-07	--	--
	Chloroform	9.9E-06	6.3E-06	8.6E-02	3.0E-01	7.4E-05	1.5E-06	1.9E-02	2.7E-08
	Cyclohexane	2.2E-05	1.4E-05	1.7E+00	6.0E+00	8.0E-06	3.2E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	8.3E-06	5.3E-06	5.7E-01	2.0E+00	9.3E-06	1.2E-06	--	--
	Freon 11	1.2E-05	7.6E-06	2.0E-01	7.0E-01	3.8E-05	1.8E-06	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	4.2E-06	2.7E-06	5.7E-02	2.0E-01	4.6E-05	6.2E-07	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	5.0E-05	3.2E-05	5.7E-02	2.0E-01	5.6E-04	7.4E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	5.7E-06	3.7E-06	1.1E-01	4.0E-01	3.2E-05	8.5E-07	3.5E-03	3.0E-09
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	1.2E-05	7.7E-06	1.0E-02	3.5E-02	7.7E-04	1.8E-06	2.1E-02	3.7E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	4.4E-05	2.8E-05	8.6E-02	3.0E-01	3.3E-04	6.6E-06	--	--
	Trichloroethene	1.7E-05	1.1E-05	1.7E-01	6.0E-01	6.2E-05	2.5E-06	7.0E-03	1.7E-08
	m,p-Xylene	1.3E-05	8.4E-06	2.0E-01	7.0E-01	4.2E-05	1.9E-06	--	--
	o-Xylene	9.9E-06	6.3E-06	2.0E-01	7.0E-01	3.2E-05	1.5E-06	--	--
						8.7E-03			2.8E-07

Attachment Table A-13
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-14		VW-14
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	1.5E-05	9.7E-06	1.7E-03	6.0E-03	5.7E-03	2.2E-06	--	--
	1,2-Dichlorobenzene	1.0E-04	6.6E-05	5.7E-02	2.0E-01	1.2E-03	1.5E-05	--	--
	1,3,5-Trimethylbenzene	6.2E-06	4.0E-06	1.7E-03	6.0E-03	2.3E-03	9.2E-07	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	1.6E-05	1.0E-05	2.3E-01	8.0E-01	4.4E-05	2.3E-06	3.9E-02	8.9E-08
	2-Butanone	7.5E-06	4.8E-06	1.4E+00	5.0E+00	3.4E-06	1.1E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	3.8E-06	2.4E-06	2.0E-01	7.0E-01	1.2E-05	5.6E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.5E-05	9.7E-06	9.0E-01	3.2E+00	1.1E-05	2.2E-06	--	--
	Benzene	9.3E-06	6.0E-06	1.7E-02	6.0E-02	3.5E-04	1.4E-06	1.0E-01	1.4E-07
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	1.3E-05	8.4E-06	2.3E-01	8.0E-01	3.7E-05	2.0E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	7.3E-06	4.7E-06	8.6E-02	3.0E-01	5.5E-05	1.1E-06	1.9E-02	2.0E-08
	Cyclohexane	5.0E-06	3.2E-06	1.7E+00	6.0E+00	1.9E-06	7.5E-07	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	3.4E-05	2.2E-05	8.6E+00	3.0E+01	2.6E-06	5.1E-06	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	4.5E-05	2.9E-05	5.7E-02	2.0E-01	5.0E-04	6.7E-06	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	1.8E-05	1.2E-05	5.7E-02	2.0E-01	2.0E-04	2.7E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	6.5E-06	4.2E-06	1.0E-02	3.5E-02	4.2E-04	9.7E-07	2.1E-02	2.0E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.7E-05	1.1E-05	8.6E-02	3.0E-01	1.3E-04	2.5E-06	--	--
	Trichloroethene	1.4E-05	8.8E-06	1.7E-01	6.0E-01	5.1E-05	2.0E-06	7.0E-03	1.4E-08
	m,p-Xylene	5.9E-06	3.8E-06	2.0E-01	7.0E-01	1.9E-05	8.8E-07	--	--
	o-Xylene	4.8E-06	3.0E-06	2.0E-01	7.0E-01	1.5E-05	7.1E-07	--	--
						1.1E-02			2.8E-07

Attachment Table A-14
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 10 ft bgs Samples

Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-1B		VW-1B
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	9.2E-06	5.9E-06	1.7E-03	6.0E-03	3.4E-03	1.4E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	4.1E-06	2.6E-06	1.7E-03	6.0E-03	1.5E-03	6.1E-07	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	5.1E-06	3.2E-06	1.4E+00	5.0E+00	2.3E-06	7.5E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	9.0E-06	5.7E-06	2.0E-01	7.0E-01	2.9E-05	1.3E-06	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	5.3E-05	3.4E-05	9.0E-01	3.2E+00	3.7E-05	7.8E-06	--	--
	Benzene	4.4E-06	2.8E-06	1.7E-02	6.0E-02	1.7E-04	6.6E-07	1.0E-01	6.7E-08
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	4.6E-06	2.9E-06	2.3E-01	8.0E-01	1.3E-05	6.9E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	1.1E-05	7.0E-06	8.6E-02	3.0E-01	8.2E-05	1.6E-06	1.9E-02	3.0E-08
	Cyclohexane	9.1E-06	5.8E-06	1.7E+00	6.0E+00	3.4E-06	1.4E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	2.7E-05	1.8E-05	5.7E-01	2.0E+00	3.1E-05	4.1E-06	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	8.8E-06	5.6E-06	2.0E+00	7.0E+00	2.8E-06	1.3E-06	--	--
	Hexane	1.5E-05	9.3E-06	5.7E-02	2.0E-01	1.6E-04	2.2E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	2.6E-06	1.7E-06	1.1E-01	4.0E-01	1.5E-05	3.9E-07	3.5E-03	1.4E-09
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	9.1E-06	5.8E-06	1.0E-02	3.5E-02	5.8E-04	1.4E-06	2.1E-02	2.8E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	5.7E-04	3.7E-04	8.6E-02	3.0E-01	4.3E-03	8.5E-05	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	8.4E-05	5.4E-05	2.0E-01	7.0E-01	2.7E-04	1.2E-05	--	--
	o-Xylene	3.9E-05	2.5E-05	2.0E-01	7.0E-01	1.3E-04	5.8E-06	--	--
							1.1E-02		1.3E-07

Attachment Table A-15
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 10 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-4B		Cancer Risk
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	6.0E-06	3.9E-06	1.7E-03	6.0E-03	2.3E-03	9.0E-07	--	--
	1,2-Dichlorobenzene	3.8E-06	2.4E-06	5.7E-02	2.0E-01	4.2E-05	5.6E-07	--	--
	1,3,5-Trimethylbenzene	2.4E-06	1.5E-06	1.7E-03	6.0E-03	9.0E-04	3.6E-07	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	3.8E-06	2.4E-06	3.0E-02	1.1E-01	8.1E-05	5.6E-07	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	5.5E-06	3.5E-06	1.4E+00	5.0E+00	2.4E-06	8.1E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	9.4E-06	6.0E-06	2.6E-03	9.1E-03	2.3E-03	1.4E-06	--	--
	4-Ethyltoluene	5.0E-06	3.2E-06	2.0E-01	7.0E-01	1.6E-05	7.4E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.7E-05	1.1E-05	9.0E-01	3.2E+00	1.2E-05	2.5E-06	--	--
	Benzene	9.2E-06	5.9E-06	1.7E-02	6.0E-02	3.4E-04	1.4E-06	1.0E-01	1.4E-07
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	2.2E-05	1.4E-05	2.3E-01	8.0E-01	6.2E-05	3.3E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	7.5E-06	4.8E-06	5.7E-01	2.0E+00	8.4E-06	1.1E-06	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	7.3E-06	4.7E-06	8.6E+00	3.0E+01	5.4E-07	1.1E-06	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	5.6E-06	3.6E-06	5.7E-02	2.0E-01	6.3E-05	8.4E-07	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	8.0E-06	5.1E-06	5.7E-02	2.0E-01	9.0E-05	1.2E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	2.4E-04	1.6E-04	1.0E-02	3.5E-02	1.6E-02	3.6E-05	2.1E-02	7.5E-07
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	4.1E-05	2.6E-05	8.6E-02	3.0E-01	3.1E-04	6.1E-06	--	--
	Trichloroethene	3.5E-06	2.3E-06	1.7E-01	6.0E-01	1.3E-05	5.3E-07	7.0E-03	3.7E-09
	m,p-Xylene	3.0E-05	1.9E-05	2.0E-01	7.0E-01	9.5E-05	4.4E-06	--	--
	o-Xylene	1.0E-05	6.6E-06	2.0E-01	7.0E-01	3.3E-05	1.5E-06	--	--
						2.2E-02			8.9E-07

Attachment Table A-16
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Off-Site Vapor Wells - 10 ft bgs Samples

Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	VW-8B		VW-8B
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	4.1E-06	2.6E-06	1.4E+00	5.0E+00	1.8E-06	6.1E-07	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.2E-05	7.4E-06	9.0E-01	3.2E+00	8.2E-06	1.7E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	3.1E-06	2.0E-06	2.3E-01	8.0E-01	8.6E-06	4.6E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	1.3E-05	8.4E-06	8.6E-02	3.0E-01	9.8E-05	1.9E-06	1.9E-02	3.6E-08
	Cyclohexane	2.4E-06	1.5E-06	1.7E+00	6.0E+00	9.0E-07	3.6E-07	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	1.4E-05	9.1E-06	5.0E-01	1.8E+00	1.8E-05	2.1E-06	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	2.8E-06	1.8E-06	5.7E-02	2.0E-01	3.2E-05	4.2E-07	--	--
	Heptane	2.7E-06	1.7E-06	2.0E+00	7.0E+00	8.5E-07	4.0E-07	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	5.2E-06	3.3E-06	1.0E-02	3.5E-02	3.3E-04	7.8E-07	2.1E-02	1.6E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	3.0E-05	1.9E-05	8.6E-02	3.0E-01	2.3E-04	4.5E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
	o-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
							7.3E-04		5.2E-08

Attachment Table A-17
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Property Boundary Vapor Wells - 8 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	PVP-1A		PVP-1A	
						Hazard Quotient	Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	Cancer Risk
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	3.4E-06	2.1E-06	1.7E-03	6.0E-03	1.3E-03	5.0E-07	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	--	--	1.7E-03	6.0E-03	--	--	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	8.6E-05	5.5E-05	1.4E+00	5.0E+00	3.9E-05	1.3E-05	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	--	--	2.0E-01	7.0E-01	--	--	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	1.5E-04	9.9E-05	9.0E-01	3.2E+00	1.1E-04	2.3E-05	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	7.1E-06	4.5E-06	2.3E-01	8.0E-01	2.0E-05	1.1E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	4.1E-05	2.6E-05	1.7E+00	6.0E+00	1.5E-05	6.1E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	1.6E-05	1.1E-05	5.0E-01	1.8E+00	2.1E-05	2.4E-06	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	1.4E-04	8.7E-05	8.6E+00	3.0E+01	1.0E-05	2.0E-05	--	--
	Freon 114	4.8E-05	3.1E-05	8.6E+00	3.0E+01	3.6E-06	7.2E-06	--	--
	Freon 12	1.3E-04	8.4E-05	5.7E-02	2.0E-01	1.5E-03	2.0E-05	--	--
	Heptane	1.8E-05	1.1E-05	2.0E+00	7.0E+00	5.6E-06	2.6E-06	--	--
	Hexane	7.5E-06	4.8E-06	5.7E-02	2.0E-01	8.4E-05	1.1E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	2.9E-05	1.8E-05	1.1E-01	4.0E-01	1.6E-04	4.3E-06	3.5E-03	1.5E-08
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	7.0E-06	4.5E-06	1.0E-02	3.5E-02	4.5E-04	1.0E-06	2.1E-02	2.1E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.6E-05	1.0E-05	8.6E-02	3.0E-01	1.2E-04	2.4E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	5.2E-06	3.3E-06	2.0E-01	7.0E-01	1.7E-05	7.7E-07	--	--
	o-Xylene	--	--	2.0E-01	7.0E-01	--	--	--	--
						3.8E-03			3.7E-08

Attachment Table A-18
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Property Boundary Vapor Wells - 8 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	PVP-2A		PVP-2A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	5.9E-06	3.8E-06	1.7E-03	6.0E-03	2.2E-03	8.7E-07	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	2.7E-06	1.7E-06	1.7E-03	6.0E-03	1.0E-03	4.0E-07	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	1.6E-04	1.0E-04	1.4E+00	5.0E+00	7.2E-05	2.4E-05	--	--
	2-Hexanone	1.1E-05	7.2E-06	8.6E-01	3.0E+00	8.4E-06	1.7E-06	--	--
	2-Propanol	2.9E-05	1.9E-05	2.6E-03	9.1E-03	7.1E-03	4.3E-06	--	--
	4-Ethyltoluene	3.3E-06	2.1E-06	2.0E-01	7.0E-01	1.1E-05	5.0E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	8.2E-05	5.2E-05	9.0E-01	3.2E+00	5.8E-05	1.2E-05	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	2.2E-05	1.4E-05	2.3E-01	8.0E-01	6.3E-05	3.3E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	--	--	5.0E-01	1.8E+00	--	--	--	--
	Ethylbenzene	2.4E-06	1.6E-06	5.7E-01	2.0E+00	2.7E-06	3.6E-07	--	--
	Freon 11	5.1E-06	3.3E-06	2.0E-01	7.0E-01	1.6E-05	7.6E-07	--	--
	Freon 113	1.2E-03	7.4E-04	8.6E+00	3.0E+01	8.7E-05	1.7E-04	--	--
	Freon 114	3.7E-05	2.4E-05	8.6E+00	3.0E+01	2.7E-06	5.5E-06	--	--
	Freon 12	2.1E-04	1.4E-04	5.7E-02	2.0E-01	2.4E-03	3.2E-05	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	1.2E-05	7.7E-06	1.0E-02	3.5E-02	7.7E-04	1.8E-06	2.1E-02	3.7E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	4.5E-06	2.9E-06	8.6E-02	3.0E-01	3.4E-05	6.7E-07	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	8.8E-06	5.6E-06	2.0E-01	7.0E-01	2.8E-05	1.3E-06	--	--
	o-Xylene	6.2E-06	4.0E-06	2.0E-01	7.0E-01	2.0E-05	9.2E-07	--	--
						1.4E-02			3.7E-08

Attachment Table A-19
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Property Boundary Vapor Wells - 8 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	PVP-3A		PVP-3A
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	1.3E-05	8.6E-06	1.7E-03	6.0E-03	5.1E-03	2.0E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	8.6E-06	5.5E-06	1.7E-03	6.0E-03	3.2E-03	1.3E-06	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	5.6E-05	3.6E-05	1.4E+00	5.0E+00	2.5E-05	8.3E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	9.0E-06	5.7E-06	2.0E-01	7.0E-01	2.9E-05	1.3E-06	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.7E-05	1.7E-05	9.0E-01	3.2E+00	1.9E-05	4.0E-06	--	--
	Benzene	2.8E-06	1.8E-06	1.7E-02	6.0E-02	1.0E-04	4.1E-07	1.0E-01	4.2E-08
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	1.7E-05	1.1E-05	2.3E-01	8.0E-01	4.9E-05	2.6E-06	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	4.5E-06	2.9E-06	8.6E-02	3.0E-01	3.3E-05	6.6E-07	1.9E-02	1.2E-08
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	8.6E-05	5.5E-05	5.0E-01	1.8E+00	1.1E-04	1.3E-05	--	--
	Ethylbenzene	7.3E-06	4.7E-06	5.7E-01	2.0E+00	8.1E-06	1.1E-06	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	3.6E-06	2.3E-06	5.7E-02	2.0E-01	4.1E-05	5.4E-07	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	1.4E-05	8.9E-06	1.0E-02	3.5E-02	8.9E-04	2.1E-06	2.1E-02	4.3E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	2.1E-05	1.3E-05	8.6E-02	3.0E-01	1.6E-04	3.1E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	1.8E-05	1.2E-05	2.0E-01	7.0E-01	5.8E-05	2.7E-06	--	--
	o-Xylene	1.8E-05	1.2E-05	2.0E-01	7.0E-01	5.9E-05	2.7E-06	--	--
						9.9E-03			9.7E-08

Attachment Table A-20
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Property Boundary Vapor Wells - 8 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	PVP-3B		PVP-3B
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	1.7E-05	1.1E-05	1.7E-03	6.0E-03	6.6E-03	2.6E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	1.0E-05	6.7E-06	1.7E-03	6.0E-03	3.9E-03	1.6E-06	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	1.8E-04	1.1E-04	1.4E+00	5.0E+00	7.9E-05	2.6E-05	--	--
	2-Hexanone	1.5E-05	9.9E-06	8.6E-01	3.0E+00	1.2E-05	2.3E-06	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	1.1E-05	7.2E-06	2.0E-01	7.0E-01	3.6E-05	1.7E-06	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	6.4E-05	4.1E-05	9.0E-01	3.2E+00	4.5E-05	9.5E-06	--	--
	Benzene	1.3E-05	8.2E-06	1.7E-02	6.0E-02	4.8E-04	1.9E-06	1.0E-01	1.9E-07
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	2.6E-04	1.7E-04	2.3E-01	8.0E-01	7.4E-04	3.9E-05	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	9.8E-06	6.3E-06	1.7E+00	6.0E+00	3.7E-06	1.5E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	2.4E-05	1.5E-05	5.0E-01	1.8E+00	3.1E-05	3.6E-06	--	--
	Ethylbenzene	1.2E-05	7.9E-06	5.7E-01	2.0E+00	1.4E-05	1.8E-06	--	--
	Freon 11	5.1E-06	3.3E-06	2.0E-01	7.0E-01	1.6E-05	7.6E-07	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	1.8E-05	1.2E-05	8.6E+00	3.0E+01	1.3E-06	2.7E-06	--	--
	Freon 12	1.7E-04	1.1E-04	5.7E-02	2.0E-01	1.9E-03	2.5E-05	--	--
	Heptane	1.1E-05	6.9E-06	2.0E+00	7.0E+00	3.4E-06	1.6E-06	--	--
	Hexane	7.9E-06	5.0E-06	5.7E-02	2.0E-01	8.8E-05	1.2E-06	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	4.6E-06	2.9E-06	2.6E-01	9.0E-01	1.1E-05	6.8E-07	--	--
	Tetrachloroethene	1.9E-05	1.2E-05	1.0E-02	3.5E-02	1.2E-03	2.8E-06	2.1E-02	5.7E-08
	Tetrahydrofuran	2.4E-06	1.5E-06	8.6E-02	3.0E-01	1.8E-05	3.6E-07	6.8E-03	2.4E-09
	Toluene	3.0E-05	1.9E-05	8.6E-02	3.0E-01	2.2E-04	4.5E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	2.7E-05	1.7E-05	2.0E-01	7.0E-01	8.6E-05	4.0E-06	--	--
	o-Xylene	3.0E-05	1.9E-05	2.0E-01	7.0E-01	9.5E-05	4.4E-06	--	--
						1.6E-02			2.5E-07

Attachment Table A-21
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Property Boundary Vapor Wells - 8 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	PVP-4A		PVP-4A Cancer Risk
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	3.4E-06	2.1E-06	1.7E-03	6.0E-03	1.3E-03	5.0E-07	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	3.8E-06	2.4E-06	1.7E-03	6.0E-03	1.4E-03	5.6E-07	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	8.6E-06	5.5E-06	1.4E+00	5.0E+00	3.9E-06	1.3E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	3.1E-06	2.0E-06	2.0E-01	7.0E-01	1.0E-05	4.7E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.0E-05	1.2E-05	9.0E-01	3.2E+00	1.4E-05	2.9E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	3.5E-06	2.3E-06	2.0E-02	7.0E-02	1.1E-04	5.3E-07	1.3E-01	6.9E-08
	Carbon Disulfide	3.7E-06	2.3E-06	2.3E-01	8.0E-01	1.0E-05	5.4E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	9.2E-06	5.9E-06	8.6E-02	3.0E-01	6.9E-05	1.4E-06	1.9E-02	2.6E-08
	Cyclohexane	1.2E-05	7.4E-06	1.7E+00	6.0E+00	4.3E-06	1.7E-06	--	--
	Dibromochloromethane	2.1E-06	1.4E-06	2.0E-02	7.0E-02	6.8E-05	3.2E-07	9.5E-02	3.0E-08
	Ethanol	1.4E-05	9.1E-06	5.0E-01	1.8E+00	1.8E-05	2.1E-06	--	--
	Ethylbenzene	4.2E-06	2.7E-06	5.7E-01	2.0E+00	4.7E-06	6.2E-07	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	3.2E-05	2.0E-05	5.7E-02	2.0E-01	3.6E-04	4.7E-06	--	--
	Heptane	9.8E-06	6.3E-06	2.0E+00	7.0E+00	3.1E-06	1.5E-06	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	3.3E-06	2.1E-06	1.1E-01	4.0E-01	1.9E-05	5.0E-07	3.5E-03	1.7E-09
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	3.3E-06	2.1E-06	2.6E-01	9.0E-01	8.2E-06	4.9E-07	--	--
	Tetrachloroethene	1.1E-05	7.2E-06	1.0E-02	3.5E-02	7.2E-04	1.7E-06	2.1E-02	3.5E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	1.1E-05	6.9E-06	8.6E-02	3.0E-01	8.0E-05	1.6E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	5.8E-06	3.7E-06	2.0E-01	7.0E-01	1.9E-05	8.7E-07	--	--
	o-Xylene	5.0E-06	3.2E-06	2.0E-01	7.0E-01	1.6E-05	7.4E-07	--	--
						4.2E-03			1.6E-07

Attachment Table A-22
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Background Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	PVP-5		PVP-5
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation	VOCs								
	1,2,4-Trimethylbenzene	1.1E-05	7.2E-06	1.7E-03	6.0E-03	4.2E-03	1.7E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	9.1E-06	5.8E-06	1.7E-03	6.0E-03	3.4E-03	1.4E-06	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	1.5E-05	9.8E-06	1.4E+00	5.0E+00	6.8E-06	2.3E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	6.1E-06	3.9E-06	2.0E-01	7.0E-01	2.0E-05	9.1E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	4.0E-05	2.6E-05	9.0E-01	3.2E+00	2.8E-05	6.0E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	--	--	2.0E-02	7.0E-02	--	--	1.3E-01	--
	Carbon Disulfide	4.9E-06	3.2E-06	2.3E-01	8.0E-01	1.4E-05	7.4E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	1.2E-05	7.8E-06	1.7E+00	6.0E+00	4.6E-06	1.8E-06	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	5.8E-05	3.7E-05	5.0E-01	1.8E+00	7.4E-05	8.7E-06	--	--
	Ethylbenzene	--	--	5.7E-01	2.0E+00	--	--	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	8.4E-06	5.4E-06	2.0E+00	7.0E+00	2.7E-06	1.2E-06	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	5.6E-06	3.6E-06	1.0E-02	3.5E-02	3.6E-04	8.3E-07	2.1E-02	1.7E-08
	Tetrahydrofuran	2.8E-06	1.8E-06	8.6E-02	3.0E-01	2.1E-05	4.1E-07	6.8E-03	2.8E-09
	Toluene	1.3E-05	8.5E-06	8.6E-02	3.0E-01	9.9E-05	2.0E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	1.1E-05	7.0E-06	2.0E-01	7.0E-01	3.5E-05	1.6E-06	--	--
	o-Xylene	7.1E-06	4.6E-06	2.0E-01	7.0E-01	2.3E-05	1.1E-06	--	--
						8.4E-03			2.0E-08

Attachment Table A-23
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Background Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	PVP-6		PVP-6
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	
Inhalation									
	VOCs								
	1,2,4-Trimethylbenzene	1.4E-05	8.7E-06	1.7E-03	6.0E-03	5.1E-03	2.0E-06	--	--
	1,2-Dichlorobenzene	--	--	5.7E-02	2.0E-01	--	--	--	--
	1,3,5-Trimethylbenzene	4.7E-06	3.0E-06	1.7E-03	6.0E-03	1.8E-03	7.0E-07	--	--
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--
	1,3-Dichlorobenzene	--	--	3.0E-02	1.1E-01	--	--	--	--
	1,4-Dichlorobenzene	--	--	2.3E-01	8.0E-01	--	--	3.9E-02	--
	2-Butanone	7.5E-06	4.8E-06	1.4E+00	5.0E+00	3.4E-06	1.1E-06	--	--
	2-Hexanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	2-Propanol	--	--	2.6E-03	9.1E-03	--	--	--	--
	4-Ethyltoluene	4.7E-06	3.0E-06	2.0E-01	7.0E-01	1.5E-05	6.9E-07	--	--
	4-Methyl-2-pentanone	--	--	8.6E-01	3.0E+00	--	--	--	--
	Acetone	2.2E-05	1.4E-05	9.0E-01	3.2E+00	1.5E-05	3.2E-06	--	--
	Benzene	--	--	1.7E-02	6.0E-02	--	--	1.0E-01	--
	Bromodichloromethane	3.2E-06	2.0E-06	2.0E-02	7.0E-02	1.0E-04	4.7E-07	1.3E-01	6.1E-08
	Carbon Disulfide	4.1E-06	2.6E-06	2.3E-01	8.0E-01	1.2E-05	6.1E-07	--	--
	Chlorobenzene	--	--	2.9E-01	1.0E+00	--	--	--	--
	Chloroform	--	--	8.6E-02	3.0E-01	--	--	1.9E-02	--
	Cyclohexane	--	--	1.7E+00	6.0E+00	--	--	--	--
	Dibromochloromethane	--	--	2.0E-02	7.0E-02	--	--	9.5E-02	--
	Ethanol	6.9E-05	4.4E-05	5.0E-01	1.8E+00	8.9E-05	1.0E-05	--	--
	Ethylbenzene	4.6E-06	2.9E-06	5.7E-01	2.0E+00	5.1E-06	6.8E-07	--	--
	Freon 11	--	--	2.0E-01	7.0E-01	--	--	--	--
	Freon 113	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 114	--	--	8.6E+00	3.0E+01	--	--	--	--
	Freon 12	--	--	5.7E-02	2.0E-01	--	--	--	--
	Heptane	--	--	2.0E+00	7.0E+00	--	--	--	--
	Hexane	--	--	5.7E-02	2.0E-01	--	--	--	--
	Methyl tert-butyl ether	--	--	2.3E+00	8.0E+00	--	--	9.1E-04	--
	Methylene Chloride	--	--	1.1E-01	4.0E-01	--	--	3.5E-03	--
	Propylbenzene	--	--	4.0E-02	1.4E-01	--	--	--	--
	Styrene	--	--	2.6E-01	9.0E-01	--	--	--	--
	Tetrachloroethene	5.6E-06	3.6E-06	1.0E-02	3.5E-02	3.6E-04	8.3E-07	2.1E-02	1.7E-08
	Tetrahydrofuran	--	--	8.6E-02	3.0E-01	--	--	6.8E-03	--
	Toluene	8.6E-06	5.5E-06	8.6E-02	3.0E-01	6.4E-05	1.3E-06	--	--
	Trichloroethene	--	--	1.7E-01	6.0E-01	--	--	7.0E-03	--
	m,p-Xylene	1.1E-05	7.0E-06	2.0E-01	7.0E-01	3.5E-05	1.6E-06	--	--
	o-Xylene	4.8E-06	3.0E-06	2.0E-01	7.0E-01	1.5E-05	7.1E-07	--	--
						7.6E-03			7.8E-08

Attachment Table A-24
 CALCULATION OF NONCANCER HAZARD AND CANCER RISK
 Indoor Air Inhalation of Soil Gas Vapors: Resident
 Site-Wide Vapor Wells - 5 ft bgs Samples
 Poway Landfill

Exposure Route	Chemical of Potential Concern	Soil Gas-to-Indoor Air EPC mg/m ³	Noncancer Intake (mg/kg-day)	Inhalation Reference Dose (mg/kg-day)	Reference Concentration (mg/m ³)	Hazard Quotient	Site-Wide UCL95		Site-Wide UCL95	
							Cancer Intake (mg/kg-day)	Inhalation Cancer Slope Factor (mg/kg-day) ⁻¹	Cancer Risk	
Inhalation	VOCs									
	1,2,4-Trimethylbenzene	2.7E-05	1.7E-05	1.7E-03	6.0E-03	1.0E-02	4.0E-06	--	--	
	1,2-Dichlorobenzene	1.6E-05	1.0E-05	5.7E-02	2.0E-01	1.8E-04	2.4E-06	--	--	
	1,3,5-Trimethylbenzene	8.8E-06	5.7E-06	1.7E-03	6.0E-03	3.3E-03	1.3E-06	--	--	
	1,3-Butadiene	--	--	--	--	--	--	9.8E-01	--	
	1,3-Dichlorobenzene	3.1E-06	2.0E-06	3.0E-02	1.1E-01	6.6E-05	4.6E-07	--	--	
	1,4-Dichlorobenzene	3.6E-06	2.3E-06	2.3E-01	8.0E-01	1.0E-05	5.3E-07	3.9E-02	2.1E-08	
	2-Butanone	1.2E-04	7.6E-05	1.4E+00	5.0E+00	5.3E-05	1.8E-05	--	--	
	2-Hexanone	8.7E-06	5.6E-06	8.6E-01	3.0E+00	6.5E-06	1.3E-06	--	--	
	2-Propanol	1.2E-05	7.4E-06	2.6E-03	9.1E-03	2.8E-03	1.7E-06	--	--	
	4-Ethyltoluene	2.5E-05	1.6E-05	2.0E-01	7.0E-01	8.1E-05	3.8E-06	--	--	
	4-Methyl-2-pentanone	2.3E-06	1.5E-06	8.6E-01	3.0E+00	1.7E-06	3.4E-07	--	--	
	Acetone	1.4E-04	8.7E-05	9.0E-01	3.2E+00	9.7E-05	2.0E-05	--	--	
	Benzene	7.6E-06	4.8E-06	1.7E-02	6.0E-02	2.8E-04	1.1E-06	1.0E-01	1.1E-07	
	Bromodichloromethane	4.0E-06	2.6E-06	2.0E-02	7.0E-02	1.3E-04	5.9E-07	1.3E-01	7.7E-08	
	Carbon Disulfide	5.5E-05	3.5E-05	2.3E-01	8.0E-01	1.5E-04	8.2E-06	--	--	
	Chlorobenzene	2.4E-06	1.5E-06	2.9E-01	1.0E+00	5.4E-06	3.6E-07	--	--	
	Chloroform	9.4E-05	6.0E-05	8.6E-02	3.0E-01	7.0E-04	1.4E-05	1.9E-02	2.6E-07	
	Cyclohexane	2.4E-05	1.5E-05	1.7E+00	6.0E+00	8.8E-06	3.5E-06	--	--	
	Dibromochloromethane	1.5E-06	9.8E-07	2.0E-02	7.0E-02	4.9E-05	2.3E-07	9.5E-02	2.2E-08	
	Ethanol	2.6E-05	1.7E-05	5.0E-01	1.8E+00	3.4E-05	3.9E-06	--	--	
	Ethylbenzene	7.0E-05	4.5E-05	5.7E-01	2.0E+00	7.9E-05	1.0E-05	--	--	
	Freon 11	4.1E-06	2.6E-06	2.0E-01	7.0E-01	1.3E-05	6.1E-07	--	--	
	Freon 113	5.1E-04	3.3E-04	8.6E+00	3.0E+01	3.8E-05	7.6E-05	--	--	
	Freon 114	2.1E-05	1.4E-05	8.6E+00	3.0E+01	1.6E-06	3.1E-06	--	--	
	Freon 12	1.7E-04	1.1E-04	5.7E-02	2.0E-01	1.9E-03	2.5E-05	--	--	
	Heptane	6.7E-06	4.3E-06	2.0E+00	7.0E+00	2.1E-06	1.0E-06	--	--	
	Hexane	1.4E-05	8.7E-06	5.7E-02	2.0E-01	1.5E-04	2.0E-06	--	--	
	Methyl tert-butyl ether	2.4E-06	1.5E-06	2.3E+00	8.0E+00	6.8E-07	3.6E-07	9.1E-04	3.3E-10	
	Methylene Chloride	1.2E-05	7.4E-06	1.1E-01	4.0E-01	6.5E-05	1.7E-06	3.5E-03	6.1E-09	
	Propylbenzene	2.4E-06	1.5E-06	4.0E-02	1.4E-01	3.8E-05	3.5E-07	--	--	
	Styrene	2.5E-06	1.6E-06	2.6E-01	9.0E-01	6.2E-06	3.7E-07	--	--	
	Tetrachloroethene	2.0E-04	1.3E-04	1.0E-02	3.5E-02	1.3E-02	3.0E-05	2.0E-02	5.9E-07	
	Tetrahydrofuran	2.0E-06	1.3E-06	8.6E-02	3.0E-01	1.5E-05	2.9E-07	6.8E-03	2.0E-09	
	Toluene	9.7E-04	6.2E-04	8.6E-02	3.0E-01	7.2E-03	1.4E-04	--	--	
	Trichloroethene	1.6E-05	1.0E-05	1.7E-01	6.0E-01	5.9E-05	2.3E-06	7.0E-03	1.6E-08	
	m,p-Xylene	5.0E-05	3.2E-05	2.0E-01	7.0E-01	1.6E-04	7.4E-06	--	--	
	o-Xylene	1.0E-04	6.5E-05	2.0E-01	7.0E-01	3.3E-04	1.5E-05	--	--	
							4E-02			1E-06

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		OffSite 5 ft bgs, VW-1A	
				Chemical	
95636			0.010	1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678			0.012	1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933				2-Butanone	
591786				2-Hexanone	
67630				2-Propanol	
622968			0.020	4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641			0.008	Acetone	
71432				Benzene	
75274				Bromodichloromethane	
75150				Carbon disulfide	
108907				Chlorobenzene	
67663			0.002	Chloroform	
110827			0.005	Cyclohexane	
124481				Chlorodibromomethane	
64175			0.006	Ethanol (as methane)	
100441			0.067	Ethylbenzene	
75694				Trichlorofluoromethane	
76131				1,1,2-Trichloro-1,2,2-trifluoroethane	
76142				Dichlorotetrafluoroethane (F114)	
75718				Dichlorodifluoromethane	
142825				Heptane	
110543				Hexane	
1634044				MTBE	
75092				Methylene chloride	
103651				n-Propylbenzene	
100425				Styrene	
127184				Tetrachloroethylene	
109999				Tetrahydrofuran	
108883			1.000	Toluene	
79016				Trichloroethylene	
106423			0.150	p-Xylene	
95476			0.084	o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	OR

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
			0.136					
	1.70	0.367						

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER	ENTER	ENTER	ENTER
70	30	30		350	

Appendix I
Residential Exposure Scenario
Soil Gas to Indoor Air

Diffusivity in air, D_a (cm ² /s)	Diffusivity in water, D_w (cm ² /s)	Henry's law constant at reference temperature, H	Henry's law constant reference temperature, T_R	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$	Normal boiling point, T_B	Critical temperature, T_C	Molecular weight, MW	Unit risk factor, URF	Reference conc., RfC
6.1E-02	7.9E-06	6.1E-03	25	9,369	442.3	649.2	120.2	0.0E+00	6.0E-03
6.9E-02	7.9E-06	1.9E-03	25	9,700	453.6	705.0	147.0	0.0E+00	2.0E-01
6.0E-02	8.7E-06	5.9E-03	25	9,321	437.9	637.3	120.2	0.0E+00	6.0E-03
2.5E-01	1.1E-05	7.3E-02	25	5,370	268.6	425.0	54.1	2.8E-04	0.0E+00
6.9E-02	7.9E-06	3.1E-03	25	9,230	446.0	684.0	147.0	0.0E+00	1.1E-01
6.9E-02	7.9E-06	2.4E-03	25	9,271	447.2	684.8	147.0	1.1E-05	8.0E-01
8.1E-02	9.8E-06	5.6E-05	25	7,481	352.5	536.8	72.1	0.0E+00	5.0E+00
7.5E-02	7.8E-06	1.4E-04	25	8,243	389.5	571.0	100.2	0.0E+00	3.0E+00
8.0E-02	9.3E-06	8.8E-06	25	10,346	390.9	563.1	60.1	0.0E+00	9.1E-03
7.0E-02	7.8E-06	7.3E-03	25	8,523	412.3	617.1	106.2	0.0E+00	7.0E-01
7.5E-02	7.8E-06	1.4E-04	25	8,243	389.5	571.0	100.2	0.0E+00	3.0E+00
1.2E-01	1.1E-05	3.9E-05	25	6,955	329.2	508.1	58.1	0.0E+00	3.2E+00
8.8E-02	9.8E-06	5.5E-03	25	7,342	353.2	562.2	78.1	2.9E-05	6.0E-02
3.0E-02	1.1E-05	1.6E-03	25	7,800	363.2	585.9	163.8	3.7E-05	7.0E-02
1.0E-01	1.0E-05	3.0E-02	25	6,391	319.0	552.0	76.1	0.0E+00	8.0E-01
7.3E-02	8.7E-06	3.7E-03	25	8,410	404.9	632.4	112.6	0.0E+00	1.0E+00
1.0E-01	1.0E-05	3.7E-03	25	6,988	334.3	536.4	119.4	5.3E-06	3.0E-01
7.4E-02	8.5E-06	1.0E-01	25	7,474	353.9	572.2	84.2	0.0E+00	6.0E+00
2.0E-02	1.1E-05	7.8E-04	25	5,900	416.1	678.2	208.3	2.7E-05	7.0E-02
1.5E-01	1.6E-05	4.5E-06	25	10,936	338.3	547.8	46.1	0.0E+00	1.8E+00
7.5E-02	7.8E-06	7.9E-03	25	8,501	409.3	617.2	106.2	0.0E+00	2.0E+00
8.7E-02	9.7E-06	9.7E-02	25	5,999	296.7	471.0	137.4	0.0E+00	7.0E-01
7.8E-02	8.2E-06	4.8E-01	25	6,463	320.7	487.3	187.4	0.0E+00	3.0E+01
7.8E-02	8.2E-06	4.8E-01	25	6,463	320.7	487.3	187.4	0.0E+00	3.0E+01
6.7E-02	9.9E-06	3.4E-01	25	9,421	243.2	385.0	120.9	0.0E+00	2.0E-01
9.3E-02	7.6E-06	1.7E+00	25	6,895	371.7	508.0	100.2	0.0E+00	7.0E+00
2.0E-01	7.8E-06	1.7E+00	25	6,895	341.7	508.0	86.2	0.0E+00	2.0E-01
1.0E-01	1.1E-05	6.2E-04	25	6,678	328.3	497.1	88.2	2.6E-07	8.0E+00
1.0E-01	1.2E-05	2.2E-03	25	6,706	313.0	510.0	84.9	1.0E-06	4.0E-01
6.0E-02	7.8E-06	1.1E-02	25	9,123	432.2	630.0	120.2	0.0E+00	1.4E-01
7.1E-02	8.0E-06	2.7E-03	25	8,737	418.3	636.0	104.2	0.0E+00	9.0E-01
7.2E-02	8.2E-06	1.8E-02	25	8,288	394.4	620.2	165.8	5.9E-06	3.5E-02
9.8E-02	1.1E-05	7.0E-05	25	0	338.2	0.0	72.1	1.9E-06	3.0E-01
8.7E-02	8.6E-06	6.6E-03	25	7,930	383.8	591.8	92.1	0.0E+00	3.0E-01
7.9E-02	9.1E-06	1.0E-02	25	7,505	360.4	544.2	131.4	2.0E-06	6.0E-01
7.7E-02	8.4E-06	7.6E-03	25	8,525	411.5	616.2	106.2	0.0E+00	7.0E-01
8.7E-02	1.0E-05	5.2E-03	25	8,661	417.6	630.3	106.2	0.0E+00	7.0E-01

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	
		θ_a^A (cm ³ /cm ³)	θ_a^B (cm ³ /cm ³)	θ_a^C (cm ³ /cm ³)	S_{te} (cm ³ /cm ³)	k_i (cm ²)	k_g (cm ²)	k_v (cm ²)	X_{crack} (cm)	$Q_{building}$ (cm ³ /s)					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.9E+01	3.4E+04				1,2,4-Trimethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,2-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.0E+01	3.4E+04				1,3,5-Trimethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,3-Butadiene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,3-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,4-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				2-Butanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				2-Hexanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				2-Propanol
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.9E+01	3.4E+04				4-Ethyltoluene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				4-Methyl-2-pentanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.9E+01	3.4E+04				Acetone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Benzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Bromodichloromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Carbon disulfide
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Chlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.0E+00	3.4E+04				Chloroform
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.8E+01	3.4E+04				Cyclohexane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Chlorodibromomethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04				Ethanol (as methanol)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.0E+02	3.4E+04				Ethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Trichlorofluoromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,1,2-Trichloro-1,2,2-trifluoroethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Dichlorotetrafluoroethane (f 114)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Dichlorodifluoromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Heptane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Hexane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				MTBE
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Methylene chloride
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				n-Propylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Styrene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Tetrachloroethylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Tetrahydrofuran
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.8E+03	3.4E+04				Toluene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Trichloroethylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.6E+02	3.4E+04				p-Xylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.7E+02	3.4E+04				o-Xylene

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, η	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclat number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)					
15	4.9E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	2.9E-02	2.9E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	6.0E+01	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	3.5E-02	3.5E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	0.0E+00		NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	8.9E+01	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	5.8E-02	5.8E-05	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	1.9E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.9E-02	1.9E-05	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	0.0E+00		NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	8.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	6.9E-03	6.9E-06	5.3E-06	3.0E-01
15	1.8E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	1.2E-02	1.2E-05	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	1.2E+01	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	1.4E-02	1.4E-05	NA	1.8E+00
15	3.0E+02	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	2.1E-01	2.1E-04	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	0.0E+00		5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01
15	3.8E+03	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	3.0E+00	3.0E-03	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01
15	6.6E+02	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	4.7E-01	4.7E-04	NA	7.0E-01
15	3.7E+02	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	2.9E-01	2.9E-04	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER	ENTER	ENTER			
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	OffSite 5 ft bgs, VW-2A	
				Chemical 1,2,4-Trimethylbenzene 1,2-Dichlorobenzene 1,3,5-Trimethylbenzene 1,3-Butadiene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 2-Propanol 4-Ethyltoluene 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Carbon disulfide Chlorobenzene Chloroform Cyclohexane Chlorodibromomethane Ethanol (as methane) Ethylbenzene Trichlorofluoromethane 1,1,2-Trichloro-1,2,2-trifluoroethane Dichlorotetrafluoroethane (F114) Dichlorodifluoromethane Heptane Hexane MTBE Methylene chloride n-Propylbenzene Styrene Tetrachloroethylene Tetrahydrofuran Toluene Trichloroethylene p-Xylene o-Xylene	
95636			0.015		
95501					
108678			0.007		
106990					
541731					
106467					
78933			0.007		
591786					
67630					
622968			0.011		
108101			0.002		
67641			0.130		
71432			0.006		
75274					
75150			0.033		
108907					
67663			0.005		
110827			0.009		
124481					
64175					
1004414			0.018		
75694					
76131					
76142					
75718					
142825			0.004		
110543			0.002		
1634044			0.001		
75092					
103651			0.002		
100425					
127184			0.004		
109999					
108883			0.044		
79016					
106423			0.049		
95476			0.026		

ENTER	ENTER	ENTER				ENTER	ENTER
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	

ENTER		ENTER		ENTER		ENTER	
Stratum A SCS soil type		Stratum A soil dry bulk density, ρ_b^A (g/cm^3)		Stratum A soil total porosity, n^A (unitless)		Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	
Lookup Soil Parameters				Lookup Soil Parameters			
1.70		0.367		0.136			

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)
70	30	30	350

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	$Q_{building}$					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.5E+01	3.4E+04			1,2,4-Trimethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			1,2-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.3E+01	3.4E+04			1,3,5-Trimethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			1,3-Butadiene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			1,3-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			1,4-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.0E+01	3.4E+04			2-Butanone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			2-Hexanone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			2-Propanol	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.9E+01	3.4E+04			4-Ethyltoluene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.9E+00	3.4E+04			4-Methyl-2-pentanone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.1E+02	3.4E+04			Acetone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.9E+01	3.4E+04			Benzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Bromodichloromethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.0E+02	3.4E+04			Carbon disulfide	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Chlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.3E+01	3.4E+04			Chloroform	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.0E+01	3.4E+04			Cyclohexane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Chlorodibromomethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Ethanol (as methanol)	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.0E+01	3.4E+04			Ethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Trichlorofluoromethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			1,1,2-Trichloro-1,2,2-trifluoroethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Dichlorotetrafluoroethane (f 114)	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Dichlorodifluoromethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.5E+01	3.4E+04			Heptane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.5E+00	3.4E+04			Hexane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	5.1E+00	3.4E+04			MTBE	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Methylene chloride	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	9.0E+00	3.4E+04			n-Propylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Styrene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.8E+01	3.4E+04			Tetrachloroethylene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Tetrahydrofuran	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.7E+02	3.4E+04			Toluene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04			Trichloroethylene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+02	3.4E+04			p-Xylene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+02	3.4E+04			o-Xylene	

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclét number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)					
15	7.5E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	4.4E-02	4.4E-05	NA	6.0E-03 1,2,4-Trimethylbenzene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01 1,2-Dichlorobenzene
15	3.3E+01	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	1.9E-02	1.9E-05	NA	6.0E-03 1,3,5-Trimethylbenzene
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA 1,3-Butadiene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01 1,3-Dichlorobenzene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01 1,4-Dichlorobenzene
15	2.0E+01	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	1.5E-02	1.5E-05	NA	5.0E+00 2-Butanone
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00 2-Hexanone
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03 2-Propanol
15	4.9E+01	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	3.2E-02	3.2E-05	NA	7.0E-01 4-Ethyltoluene
15	7.9E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	5.5E-03	5.5E-06	NA	3.0E+00 4-Methyl-2-pentanone
15	3.1E+02	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	3.1E-01	3.1E-04	NA	3.2E+00 Acetone
15	1.9E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	1.5E-02	1.5E-05	2.9E-05	6.0E-02 Benzene
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02 Bromodichloromethane
15	1.0E+02	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	9.1E-02	9.1E-05	NA	8.0E-01 Carbon disulfide
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00 Chlorobenzene
15	2.3E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	2.0E-02	2.0E-05	5.3E-06	3.0E-01 Chloroform
15	3.0E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	2.1E-02	2.1E-05	NA	6.0E+00 Cyclohexane
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02 Chlorodibromomethane
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00 Ethanol (as methanol)
15	8.0E+01	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	5.5E-02	5.5E-05	NA	2.0E+00 Ethylbenzene
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01 Trichlorofluoromethane
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01 1,1,2-Trichloro-1,2,2-trifluoroethane
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01 Dichlorotetrafluoroethane (f 114)
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01 Dichlorodifluoromethane
15	1.5E+01	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	1.2E-02	1.2E-05	NA	7.0E+00 Heptane
15	7.5E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	9.5E-03	9.5E-06	NA	2.0E-01 Hexane
15	5.1E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	4.4E-03	4.4E-06	2.6E-07	8.0E+00 MTBE
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01 Methylene chloride
15	9.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	5.3E-03	5.3E-06	NA	1.4E-01 n-Propylbenzene
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01 Styrene
15	2.8E+01	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	1.9E-02	1.9E-05	5.9E-06	3.5E-02 Tetrachloroethylene
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01 Tetrahydrofuran
15	1.7E+02	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.3E-01	1.3E-04	NA	3.0E-01 Toluene
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01 Trichloroethylene
15	2.2E+02	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	1.5E-01	1.5E-04	NA	7.0E-01 p-Xylene
15	1.2E+02	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	8.8E-02	8.8E-05	NA	7.0E-01 o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER Soil gas conc., C_g (ppmv)	ENTER OR	OffSite 5 ft bgs, VW-3A																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
1,2,4-Trimethylbenzene																																										
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95501																																										
108678																																										
106990																																										
541731																																										
106467																																										
78933		0.001																																								
591786																																										
67630																																										
622968																																										
108101																																										
67641		0.006																																								
71432																																										
75274		0.006																																								
75150		0.001																																								
108907																																										
67663		0.044																																								
110827		0.002																																								
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100441		0.002																																								
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76142																																										
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142825																																										
110543																																										
1634044																																										
75092																																										
103651																																										
100425																																										
127184																																										
109999																																										
108883		0.004																																								
79016																																										
106423		0.004																																								
95476		0.002																																								

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	

ENTER Stratum A SCS soil type Lookup Soil Parameters		ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)		ENTER Stratum A soil total porosity, n^A (unitless)		ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)		ENTER Stratum B SCS soil type Lookup Soil Parameters		ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)		ENTER Stratum B soil total porosity, n^B (unitless)		ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)		ENTER Stratum C SCS soil type Lookup Soil Parameters	
5' bgs																	
1.70		0.367		0.136													

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER	ENTER	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)		
70	30			30	350		

Exposure duration, τ	Source-building separation, (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall				
		soil	soil	soil	soil	effective	total fluid	intrinsic	relative air	effective vapor	soil	soil	soil	permeability,	permeability,	permeability,	perimeter,	Bldg.
		L_T (cm)	θ_a^A (cm^3/cm^3)	θ_a^B (cm^3/cm^3)	θ_a^C (cm^3/cm^3)	S_{te} (cm^3/cm^3)		k_i (cm^2)	k_g (cm^2)	k_v (cm^2)	X_{crack} (cm)	conc.	Q_{building} ($\mu\text{g}/\text{m}^3$)	gas rate, (cm^3/s)	Soil ventilation			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.0E+00	3.4E+04						1,2,4-Trimethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,2-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,3,5-Trimethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,3-Butadiene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,3-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,4-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.9E+00	3.4E+04						2-Butanone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						2-Hexanone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						2-Propanol	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						4-Ethyltoluene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						4-Methyl-2-pentanone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Acetone	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.4E+01	3.4E+04						Benzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Bromodichloromethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.3E+00	3.4E+04						Carbon disulfide	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Chlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+02	3.4E+04						Chloroform	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.0E+00	3.4E+04						Cyclohexane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Chlorodibromomethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Ethanol (as methanol)	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.1E+00	3.4E+04						Ethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Trichlorofluoromethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,1,2-Trichloro-1,2,2-trifluoroethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Dichlorotetrafluoroethane (f 114)	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Dichlorodifluoromethane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Heptane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Hexane	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						MTBE	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Methylene chloride	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						n-Propylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Styrene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Tetrachloroethylene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Tetrahydrofuran	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.7E+01	3.4E+04						Toluene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Trichloroethylene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.8E+01	3.4E+04						p-Xylene	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.9E+00	3.4E+04						o-Xylene	

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, η	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclét number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)				
15	8.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	4.7E-03	4.7E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	3.9E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	2.9E-03	2.9E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	1.4E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.3E-02	1.3E-05	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05	6.0E-02
15	3.8E+01	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	1.3E-02	1.3E-05	3.7E-05	7.0E-02
15	4.4E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	3.8E-03	3.8E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	2.2E+02	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	1.9E-01	1.9E-04	5.3E-06	3.0E-01
15	6.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	4.1E-03	4.1E-06	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00
15	7.1E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	4.9E-03	4.9E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	0.0E+00		5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01
15	1.7E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.3E-02	1.3E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01
15	1.8E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	1.3E-02	1.3E-05	NA	7.0E-01
15	8.9E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	6.8E-03	6.8E-06	NA	7.0E-01
											o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03						
ENTER	ENTER	ENTER								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	Soil gas conc., C_g (ppmv)	OR	OffSite 5 ft bgs, VW-4A						
95636				Chemical						
95501				1,2,4-Timethylbenzene						
108678				1,2-Dichlorobenzene						
106990				1,3,5-Trimethylbenzene						
541731				1,3-Butadiene						
106467				1,3-Dichlorobenzene						
78933		0.002		1,4-Dichlorobenzene						
591786				2-Butanone						
67630				2-Hexanone						
622968				2-Propanol						
108101				4-Ethyltoluene						
67641		0.009		4-Methyl-2-pentanone						
71432				Acetone						
75274				Benzene						
75150		0.003		Bromodichloromethane						
108907				Carbon disulfide						
67663				Chlorobenzene						
110827				Chloroform						
124481				Cyclohexane						
64175		0.010		Chlorodibromomethane						
100414				Ethanol (as methanol)						
75694				Ethylbenzene						
76131				Trichlorofluoromethane						
76142				1,1,2-Trichloro-1,2,2-trifluoroethane						
75718		0.002		Dichlorotetrafluoroethane (f 114)						
142825				Dichlorodifluoromethane						
110543				Heptane						
1634044				Hexane						
75092				MTBE						
103651				Methylene chloride						
100425				n-Propylbenzene						
127184		0.059		Styrene						
109999				Tetrachloroethylene						
108883		0.003		Tetrahydrofuran						
79016				Toluene						
106423		0.002		Trichloroethylene						
95476		0.002		p-Xylene						
				o-Xylene						
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER			
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s (°C)	Totals must add up to value of L_s (cell F24)			Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (cm)	Thickness of soil stratum C, h_C (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5					s	OR	
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum B SCS soil type	Stratum C SCS soil type	
Lookup Soil Parameters	5' bgs ENTER	ENTER	ENTER	Lookup Soil Parameters	ENTER	ENTER	ENTER	Lookup Soil Parameters	ENTER	
1.70	0.367	0.136								
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	space floor length, L_B (cm)	space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg OR	Leave blank to calculate Q_{soil} (L/m)	ENTER	
10	40	1000	1000	244	0.1	0.5			5	
ENTER	ENTER	ENTER	ENTER							
Averaging time for carcinogens, AT_c (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)							
70	30	30	350							

Exposure duration, τ	Source-building separation, L_T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. Soil gas rate, $Q_{building}$ (cm ³ /s)
		soil	air-filled	soil	air-filled	soil	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	seam perimeter,			
		θ_a^A	θ_a^B	θ_a^C		S_{te}		k_i	k_g	k_v	X_{crack}		conc.		
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2,4-Trimethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3,5-Trimethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	6.3E+00	3.4E+04	2-Butanone	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Hexanone	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Propanol	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Ethyltoluene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	2.2E+01	3.4E+04	Acetone	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Benzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	7.9E+00	3.4E+04	Carbon disulfide	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chloroform	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Cyclohexane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	1.9E+01	3.4E+04	Ethanol (as methanol)	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Ethylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Trichlorofluoromethane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Dichlorotetrafluoroethane (f 114)	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	8.6E+00	3.4E+04	Dichlorodifluoromethane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Heptane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Hexane	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	MTBE	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Methylene chloride	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Styrene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	4.1E+02	3.4E+04	Tetrachloroethylene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Tetrahydrofuran	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	1.3E+01	3.4E+04	Toluene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Trichloroethylene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	9.3E+00	3.4E+04	p-Xylene	
9.5E+08	137.5	0.231	ERROR	ERROR		0.264		1.0E-07	0.694	7.0E-08	4,000	6.6E+00	3.4E+04	o-Xylene	

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, η	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclat number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)				
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00	2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA 1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05 8.0E-01
15	6.3E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	4.6E-03	4.6E-06	NA 5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA 9.1E-03
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	2.2E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	2.1E-02	2.1E-05	NA 3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05 6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05 7.0E-02
15	7.9E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	6.9E-03	6.9E-06	NA 8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA 1.0E+00
15	0.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	0.0E+00		5.3E-06 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	0.0E+00		NA 6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05 7.0E-02
15	1.9E+01	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	2.2E-02	2.2E-05	NA 1.8E+00
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	0.0E+00		NA 2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	8.6E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	5.4E-03	5.4E-06	NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA 7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07 8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06 4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA 1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA 9.0E-01
15	4.1E+02	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	2.7E-01	2.7E-04	5.9E-06 3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06 3.0E-01
15	1.3E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.0E-02	1.0E-05	NA 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06 6.0E-01
15	9.3E+00	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	6.6E-03	6.6E-06	NA 7.0E-01
15	6.6E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	5.1E-03	5.1E-06	NA 7.0E-01
										o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		OffSite 5 ft bgs, VW-5A	
				Chemical	
95636				1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678				1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933		0.002		2-Butanone	
591786				2-Hexanone	
67630				2-Propanol	
622968				4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641				Acetone	
71432				Benzene	
75274				Bromodichloromethane	
75150		0.012		Carbon disulfide	
108907				Chlorobenzene	
67663		0.001		Chloroform	
110827				Cyclohexane	
124481				Chlorodibromomethane	
64175				Ethanol (as methane)	
100441				Ethylbenzene	
75694				Trichlorofluoromethane	
76131		0.004		1,1,2-Trichloro-1,2,2-trifluoroethane	
76142				Dichlorotetrafluoroethane (F114)	
75718		0.004		Dichlorodifluoromethane	
142825				Heptane	
110543				Hexane	
1634044				MTBE	
75092				Methylene chloride	
103651				n-Propylbenzene	
100425				Styrene	
127184		0.019		Tetrachloroethylene	
109999				Tetrahydrofuran	
108883				Toluene	
79016		0.002		Trichloroethylene	
106423				p-Xylene	
95476				o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER ENTER ENTER Totals must add up to value of L_s (cell F24)			ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	OR

ENTER Stratum A SCS soil type		ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)		ENTER Stratum A soil total porosity, n^A (unitless)		ENTER Stratum B SCS soil type		ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)		ENTER Stratum B soil total porosity, n^B (unitless)		ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)		ENTER Stratum C SCS soil type			
Lookup Soil Parameters		0.367		0.136		Lookup Soil Parameters		0.170		0.367		0.136		0.170		0.367	

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	30	30	350

Vapor Well: VW-5A

Appendix I

Residential Exposure Scenario

Soil Gas to Indoor Air

Vapor Well: VW-5A

Appendix I
Residential Exposure Scenario
Soil Gas to Indoor Air

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, η	Crack depth Z _{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum A coefficient, D ^{eff} _A (cm ² /s)	Stratum B coefficient, D ^{eff} _B (cm ² /s)	Stratum C coefficient, D ^{eff} _C (cm ² /s)	Total diffusion coefficient, D ^{eff} _T (cm ² /s)	Overall path length, L _d (cm)		
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03	137.5	1,2,4-Trimethylbenzene	
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03	137.5	1,2-Dichlorobenzene	
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03	137.5	1,3,5-Trimethylbenzene	
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02	137.5	1,3-Butadiene	
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03	137.5	1,3-Dichlorobenzene	
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03	137.5	1,4-Dichlorobenzene	
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03	137.5	2-Butanone	
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03	137.5	2-Hexanone	
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03	137.5	2-Propanol	
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03	137.5	4-Ethyltoluene	
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03	137.5	4-Methyl-2-pentanone	
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03	137.5	Acetone	
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03	137.5	Benzene	
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03	137.5	Bromodichloromethane	
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03	137.5	Carbon disulfide	
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03	137.5	Chlorobenzene	
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03	137.5	Chloroform	
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03	137.5	Cyclohexane	
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03	137.5	Chlorodibromomethane	
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03	137.5	Ethanol (as methanol)	
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03	137.5	Ethylbenzene	
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03	137.5	Trichlorofluoromethane	
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03	137.5	1,1,2-Trichloro-1,2,2-trifluoroethane	
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03	137.5	Dichlorotetrafluoroethane (f 114)	
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03	137.5	Dichlorodifluoromethane	
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03	137.5	Heptane	
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02	137.5	Hexane	
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03	137.5	MTBE	
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03	137.5	Methylene chloride	
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03	137.5	n-Propylbenzene	
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03	137.5	Styrene	
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03	137.5	Tetrachloroethylene	
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03	137.5	Tetrahydrofuran	
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03	137.5	Toluene	
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03	137.5	Trichloroethylene	
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03	137.5	p-Xylene	
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03	137.5	o-Xylene	

Vapor Well: VW-5A

Appendix I
Residential Exposure Scenario
Soil Gas to Indoor Air

Convection path length, L _p (cm)	Source C _{source} (µg/m ³)	Average vapor conc., r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm ³ /s)	Crack diffusion coefficient, D ^{crack} (cm ² /s)	Area of crack, A _{crack} (cm ²)	Exponent of equivalent foundation Pelet number, exp(Pe ^f) (unitless)	Infinite source attenuation coefficient, α (unitless)	Infinite indoor source conc., C _{building} (µg/m ³)	Infinite source URF, C _{building} (mg/m ³) (mg/m ³) ⁻¹	Unit risk factor, Reference conc., RfC (mg/m ³)
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04 NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA 1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05 8.0E-01
15	6.6E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	4.9E-03	4.9E-06	NA 5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA 9.1E-03
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	0.0E+00	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	0.0E+00		NA 3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05 6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05 7.0E-02
15	3.8E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	3.3E-02	3.3E-05	NA 8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA 1.0E+00
15	6.5E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	5.6E-03	5.6E-06	5.3E-06 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	0.0E+00		NA 6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05 7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA 1.8E+00
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	0.0E+00		NA 2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA 7.0E-01
15	3.4E+01	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	2.4E-02	2.4E-05	NA 3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	2.2E+01	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	1.4E-02	1.4E-05	NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA 7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07 8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06 4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA 1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA 9.0E-01
15	1.3E+02	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	8.8E-02	8.8E-05	5.9E-06 3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA 3.0E-01
15	9.9E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	7.1E-03	7.1E-06	2.0E-06 6.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA 7.0E-01
										Tetrachloroethylene
										Tetrahydrofuran
										Toluene
										Trichloroethylene
										p-Xylene
										o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		OffSite 5 ft bgs, VW-6A	
				Chemical	
95636			0.002	1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678				1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933			0.004	2-Butanone	
591786				2-Hexanone	
67630				2-Propanol	
622968			0.001	4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641			0.012	Acetone	
71432			0.004	Benzene	
75274				Bromodichloromethane	
75150			0.021	Carbon disulfide	
108907				Chlorobenzene	
67663				Chloroform	
110827				Cyclohexane	
124481				Chlorodibromomethane	
64175				Ethanol (as methane)	
100441			0.003	Ethylbenzene	
75694				Trichlorofluoromethane	
76131				1,1,2-Trichloro-1,2,2-trifluoroethane	
76142				Dichlorotetrafluoroethane (F114)	
75718			0.001	Dichlorodifluoromethane	
142825				Heptane	
110543				Hexane	
1634044				MTBE	
75092				Methylene chloride	
103651				n-Propylbenzene	
100425				Styrene	
127184			0.006	Tetrachloroethylene	
109999			0.001	Tetrahydrofuran	
108883			0.014	Toluene	
79016				Trichloroethylene	
106423			0.009	p-Xylene	
95476			0.004	o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Totals must add up to value of L_s (cell F24) ENTER Thickness of soil stratum A, h_A (cm) ENTER Thickness of soil stratum B, h_B (cm) ENTER Thickness of soil stratum C, h_C (cm)			ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	OR

ENTER Stratum A SCS soil type Lookup Soil Parameters		ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)		ENTER Stratum A soil total porosity, n^A (unitless)		ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)		ENTER Stratum B SCS soil type Lookup Soil Parameters		ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)		ENTER Stratum B soil total porosity, n^B (unitless)		ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)		ENTER Stratum C SCS soil type Lookup Soil Parameters	
5' bgs		1.70		0.367		0.136											

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	
10	40	1000	1000	244	0.1	0.5	5	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)				
70	30	30	350				

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall		Bldg.	
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	Soil rate,	ventilation	
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	$\mu\text{g}/\text{m}^3$	cm^3/s	cm^3/s	cm	$\mu\text{g}/\text{m}^3$	cm^3/s	cm^3/s	
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.0E+01	3.4E+04	1,2,4-Trimethylbenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3,5-Trimethylbenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04	2-Butanone					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Hexanone					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Propanol					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.2E+00	3.4E+04	4-Ethyltoluene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.9E+01	3.4E+04	Acetone					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04	Benzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.7E+01	3.4E+04	Carbon disulfide					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chloroform					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Cyclohexane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Ethanol (as methanol)					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04	Ethylbenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Trichlorofluoromethane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Dichlorotetrafluoroethane (f 114)					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.6E+00	3.4E+04	Dichlorodifluoromethane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Heptane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Hexane					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	MTBE					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Methylene chloride					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Styrene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.3E+01	3.4E+04	Tetrachloroethylene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.9E+00	3.4E+04	Tetrahydrofuran					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	5.4E+01	3.4E+04	Toluene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Trichloroethylene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.9E+01	3.4E+04	p-Xylene					
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.8E+01	3.4E+04	o-Xylene					

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclat number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)					
15	1.0E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	5.9E-03	5.9E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	1.2E+01	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	9.1E-03	9.1E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	6.2E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	4.1E-03	4.1E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	2.9E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	2.8E-02	2.8E-05	NA	3.2E+00
15	1.2E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	9.6E-03	9.6E-06	2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02
15	6.7E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	5.8E-02	5.8E-05	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	0.0E+00		5.3E-06	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	0.0E+00		NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00
15	1.2E+01	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	8.3E-03	8.3E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	6.6E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	4.2E-03	4.2E-06	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	4.3E+01	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	2.9E-02	2.9E-05	5.9E-06	3.5E-02
15	3.9E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	3.3E-03	3.3E-06	1.9E-06	3.0E-01
15	5.4E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	4.1E-02	4.1E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01
15	3.9E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	2.7E-02	2.7E-05	NA	7.0E-01
15	1.8E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.4E-02	1.4E-05	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER	ENTER	ENTER																																								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	OffSite 5 ft bgs, VW-7A																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
1,2,4-Trimethylbenzene																																										
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Toluene																																										
Trichloroethylene																																										
p-Xylene																																										
o-Xylene																																										
95636			0.002																																							
95501																																										
108678																																										
106990																																										
541731																																										
106467																																										
78933			0.003																																							
591786																																										
67630																																										
622968			0.002																																							
108101																																										
67641			0.007																																							
71432			0.003																																							
75274			0.004																																							
75150			0.029																																							
108907																																										
67663			0.022																																							
110827			0.003																																							
124481																																										
64175																																										
100441			0.002																																							
75694																																										
76131																																										
76142																																										
75718																																										
142825																																										
110543			0.005																																							
1634044																																										
75092			0.005																																							
103651																																										
100425																																										
127184			0.004																																							
109999																																										
108883			0.006																																							
79016			0.019																																							
106423			0.005																																							
95476			0.002																																							

ENTER	ENTER	ENTER			
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	ENTER	ENTER	ENTER
			Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)
15	152.5	19	152.5		

5' bgs								
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum C SCS soil type
Lookup Soil Parameters			Lookup Soil Parameters					Lookup Soil Parameters
	1.70	0.367	0.136					

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER	ENTER		
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)		
70	30	30	350		

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, η	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Radius, r _{crack} (cm)	Average vapor flow rate Q _{soil} (cm^3/s)	Crack effective diffusion coefficient, D ^{crack} (cm^2/s)	Area of crack, A _{crack} (cm^2)	Exponent of equivalent foundation Pelet number, exp(Pe ^f) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
15	8.5E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	5.0E-03	5.0E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	7.5E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	5.5E-03	5.5E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	7.5E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	5.0E-03	5.0E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	1.7E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.7E-02	1.7E-05	NA	3.2E+00
15	8.5E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	6.6E-03	6.6E-06	2.9E-05	6.0E-02
15	2.5E+01	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	8.4E-03	8.4E-06	3.7E-05	7.0E-02
15	9.2E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	8.0E-02	8.0E-05	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	1.1E+02	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	9.5E-02	9.5E-05	5.3E-06	3.0E-01
15	1.2E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	8.1E-03	8.1E-06	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00
15	9.3E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	6.4E-03	6.4E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00
15	1.8E+01	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	2.2E-02	2.2E-05	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	1.8E+01	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	1.5E-02	1.5E-05	1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	2.6E+01	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	1.7E-02	1.7E-05	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01
15	2.4E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.9E-02	1.9E-05	NA	3.0E-01
15	1.0E+02	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	7.5E-02	7.5E-05	2.0E-06	6.0E-01
15	2.0E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	1.4E-02	1.4E-05	NA	7.0E-01
15	9.7E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	7.5E-03	7.5E-06	NA	7.0E-01
											o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03				
ENTER	ENTER	ENTER						
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	OffSite 5 ft bgs, VW-8A				
				Chemical 1,2,4-Trimethylbenzene 1,2-Dichlorobenzene 1,3,5-Trimethylbenzene 1,3-Butadiene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 2-Propanol 4-Ethyltoluene 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Carbon disulfide Chlorobenzene Chloroform Cyclohexane Chlorodibromomethane Ethanol (as methane) Ethylbenzene Trichlorofluoromethane 1,1,2-Trichloro-1,2,2-trifluoroethane Dichlorotetrafluoroethane (F114) Dichlorodifluoromethane Heptane Hexane MTBE Methylene chloride n-Propylbenzene Styrene Tetrachloroethylene Tetrahydrofuran Toluene Trichloroethylene p-Xylene o-Xylene				
95636								
95501								
108678								
106990								
541731								
106467								
78933			0.003					
591786								
67630								
622968								
108101								
67641			0.010					
71432								
75274								
75150			0.001					
108907								
67663			0.004					
110827			0.002					
124481								
64175								
100441								
75694								
76131								
76142								
75718			0.001					
142825								
110543								
1634044								
75092								
103651								
100425								
127184			0.002					
109999								
108883								
79016			0.004					
106423								
95476								
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER			
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)	
15	152.5	19	152.5			s		
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum C SCS soil type
				Lookup Soil Parameters				Lookup Soil Parameters
	1.70	0.367	0.136					
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	
10	40	1000	1000	244	0.1	0.5	5	
ENTER	ENTER	ENTER	ENTER					
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)					
70	30	30	350					

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A soil	Stratum B soil	Stratum C soil	Stratum A effective total fluid saturation,	Stratum A soil intrinsic permeability, S_{te} (cm ³ /cm ³)	Stratum A soil relative air permeability, k_i (cm ²)	Stratum A soil effective vapor permeability, k_g (cm ²)	Stratum A soil permeability, k_v (cm ²)	Floor-wall seam perimeter, X_{crack} (cm)	Bldg. Soil gas conc. (µg/m ³)	Q _{building} (cm ³ /s)
		θ_a^A	θ_a^B	θ_a^C								
		(cm ³ /cm ³)	(cm ³ /cm ³)	(cm ³ /cm ³)								
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2,4-Trimethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3,5-Trimethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Butanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.4E+00	3.4E+04	2-Hexanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Propanol
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Ethyltoluene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Acetone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.4E+01	3.4E+04	Benzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.5E+00	3.4E+04	Carbon disulfide
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+01	3.4E+04	Chloroform
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.0E+00	3.4E+04	Cyclohexane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Ethanol (as methanol)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Ethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Trichlorofluoromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Dichlorotetrafluoroethane (f 114)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.1E+00	3.4E+04	Dichlorodifluoromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Heptane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Hexane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	MTBE
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Methylene chloride
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Styrene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.5E+01	3.4E+04	Tetrachloroethylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Tetrahydrofuran
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Toluene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.0E+01	3.4E+04	Trichloroethylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	p-Xylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	o-Xylene

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, η	Crack depth Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclat number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)				
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04 NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA 1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05 8.0E-01
15	8.4E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	6.2E-03	6.2E-06	NA 5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA 9.1E-03
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	2.4E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	2.4E-02	2.4E-05	NA 3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05 6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05 7.0E-02
15	3.5E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	3.0E-03	3.0E-06	NA 8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA 1.0E+00
15	2.2E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	1.9E-02	1.9E-05	5.3E-06 3.0E-01
15	6.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	4.1E-03	4.1E-06	NA 6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05 7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA 1.8E+00
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	0.0E+00		NA 2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	7.1E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	4.5E-03	4.5E-06	NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA 7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07 8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06 4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA 1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA 9.0E-01
15	1.5E+01	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	1.0E-02	1.0E-05	5.9E-06 3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA 3.0E-01
15	2.0E+01	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	1.5E-02	1.5E-05	2.0E-06 6.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02					o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		OffSite 5 ft bgs, VW-10																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
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p-Xylene																																										
o-Xylene																																										
95636			0.002																																							
95501																																										
108678																																										
106990																																										
541731																																										
106467																																										
78933			0.002																																							
591786																																										
67630																																										
622968			0.001																																							
108101																																										
67641			0.005																																							
71432			0.003																																							
75274																																										
75150			0.002																																							
108907																																										
67663			0.026																																							
110827			0.002																																							
124481																																										
64175																																										
100441			0.002																																							
75694																																										
76131																																										
76142																																										
75718																																										
142825																																										
110543			0.003																																							
1634044																																										
75092			0.006																																							
103651																																										
100425																																										
127184																																										
109999																																										
108883																																										
79016																																										
106423			0.007																																							
95476																																										

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
			0.136					
	1.70	0.367						

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER	ENTER			
70	30	30	350			

Exposure duration, τ	Source-building separation, (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall		Bldg.			
		soil	soil	soil	soil	effective	total fluid	intrinsic	relative air	effective vapor	soil	soil	permeability,	permeability,	permeability,	seam	Soil	gas	rate,
		L_T (cm)	θ_a^A (cm^3/cm^3)	θ_a^B (cm^3/cm^3)	θ_a^C (cm^3/cm^3)	S_{te} (cm^3/cm^3)		k_i (cm^2)	k_g (cm^2)	k_v (cm^2)		X_{crack} (cm)				conc.	$Q_{building}$ (cm^3/s)		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04						1,2,4-Trimethylbenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,2-Dichlorobenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,3,5-Trimethylbenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,3-Butadiene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,3-Dichlorobenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,4-Dichlorobenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.0E+00	3.4E+04						2-Butanone		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						2-Hexanone		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						2-Propanol		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.2E+00	3.4E+04						4-Ethyltoluene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						4-Methyl-2-pentanone		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.1E+01	3.4E+04						Acetone		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.1E+00	3.4E+04						Benzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Bromodichloromethane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.0E+00	3.4E+04						Carbon disulfide		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Chlorobenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.3E+02	3.4E+04						Chloroform		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.7E+00	3.4E+04						Cyclohexane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Chlorodibromomethane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Ethanol (as methanol)		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.1E+00	3.4E+04						Ethylbenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Trichlorofluoromethane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						1,1,2-Trichloro-1,2,2-trifluoroethane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Dichlorotetrafluoroethane (f 114)		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Dichlorodifluoromethane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Heptane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	9.0E+00	3.4E+04						Hexane		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						MTBE		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.0E+01	3.4E+04						Methylene chloride		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						n-Propylbenzene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Styrene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Tetrachloroethylene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Tetrahydrofuran		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Toluene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						Trichloroethylene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.9E+01	3.4E+04						p-Xylene		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04						o-Xylene		

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclét number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)					
15	1.2E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	6.8E-03	6.8E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	6.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	4.4E-03	4.4E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	6.2E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	4.1E-03	4.1E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	1.1E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.1E-02	1.1E-05	NA	3.2E+00
15	8.1E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	6.3E-03	6.3E-06	2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02
15	6.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	5.2E-03	5.2E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	1.3E+02	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	1.1E-01	1.1E-04	5.3E-06	3.0E-01
15	6.7E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	4.5E-03	4.5E-06	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00
15	7.1E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	4.9E-03	4.9E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00
15	9.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	1.1E-02	1.1E-05	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	2.0E+01	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	1.7E-02	1.7E-05	1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	0.0E+00		5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01
15	2.9E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	2.1E-02	2.1E-05	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER	ENTER	ENTER																																								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	OffSite 5 ft bgs, VW-11																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
1,2,4-Trimethylbenzene																																										
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1,1,2-Trichloro-1,2,2-trifluoroethane																																										
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Styrene																																										
Tetrachloroethylene																																										
Tetrahydrofuran																																										
Toluene																																										
Trichloroethylene																																										
p-Xylene																																										
o-Xylene																																										
95636			0.012																																							
95501																																										
108678			0.004																																							
106990																																										
541731																																										
106467																																										
78933			0.003																																							
591786																																										
67630																																										
622968			0.006																																							
108101																																										
67641			0.005																																							
71432			0.002																																							
75274																																										
75150			0.010																																							
108907																																										
67663			0.003																																							
110827			0.003																																							
124481																																										
64175																																										
100441			0.003																																							
75694																																										
76131																																										
76142																																										
75718																																										
142825																																										
110543			0.002																																							
1634044																																										
75092																																										
103651			0.001																																							
100425																																										
127184																																										
109999																																										
108883			0.007																																							
79016																																										
106423			0.011																																							
95476			0.007																																							

ENTER	ENTER	ENTER			
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	ENTER	ENTER	ENTER
			Totals must add up to value of L_s (cell F24)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)
			(Enter value or 0) (cm)		Thickness of soil stratum C, h_C (cm)
					(Enter value or 0) (cm)
					(Enter value or 0) (cm)
15	152.5	19	152.5		

ENTER		ENTER		ENTER		ENTER	
Stratum A SCS soil type		Stratum A soil dry bulk density, ρ_b^A (g/cm^3)		Stratum A soil total porosity, n^A (unitless)		Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	
Lookup Soil Parameters				Lookup Soil Parameters			
1.70		0.367		0.136			

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)		
70	30	30	350		

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclat number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)			
15	6.0E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	3.6E-02	3.6E-05	NA	6.0E-03 1,2,4-Trimethylbenzene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01 1,2-Dichlorobenzene
15	1.8E+01	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	1.0E-02	1.0E-05	NA	6.0E-03 1,3,5-Trimethylbenzene
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA 1,3-Butadiene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01 1,3-Dichlorobenzene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01 1,4-Dichlorobenzene
15	7.5E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	5.5E-03	5.5E-06	NA	5.0E+00 2-Butanone
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00 2-Hexanone
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03 2-Propanol
15	2.7E+01	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	1.8E-02	1.8E-05	NA	7.0E-01 4-Ethyltoluene
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00 4-Methyl-2-pentanone
15	1.2E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.1E-02	1.1E-05	NA	3.2E+00 Acetone
15	5.9E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	4.5E-03	4.5E-06	2.9E-05	6.0E-02 Benzene
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02 Bromodichloromethane
15	3.1E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	2.7E-02	2.7E-05	NA	8.0E-01 Carbon disulfide
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00 Chlorobenzene
15	1.3E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	1.2E-02	1.2E-05	5.3E-06	3.0E-01 Chloroform
15	8.8E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	6.0E-03	6.0E-06	NA	6.0E+00 Cyclohexane
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02 Chlorodibromomethane
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00 Ethanol (as methanol)
15	1.3E+01	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	9.2E-03	9.2E-06	NA	2.0E+00 Ethylbenzene
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01 Trichlorofluoromethane
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01 1,1,2-Trichloro-1,2,2-trifluoroethane
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01 Dichlorotetrafluoroethane (f 114)
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01 Dichlorodifluoromethane
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00 Heptane
15	6.8E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	8.6E-03	8.6E-06	NA	2.0E-01 Hexane
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00 MTBE
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01 Methylene chloride
15	7.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	4.1E-03	4.1E-06	NA	1.4E-01 n-Propylbenzene
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01 Styrene
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	0.0E+00		5.9E-06	3.5E-02 Tetrachloroethylene
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01 Tetrahydrofuran
15	2.7E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	2.1E-02	2.1E-05	NA	3.0E-01 Toluene
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01 Trichloroethylene
15	4.9E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	3.4E-02	3.4E-05	NA	7.0E-01 p-Xylene
15	3.0E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	2.3E-02	2.3E-05	NA	7.0E-01 o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		OffSite 5 ft bgs, VW-12	
				Chemical	
95636				1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678				1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933		0.003		2-Butanone	
591786				2-Hexanone	
67630				2-Propanol	
622968				4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641		0.009		Acetone	
71432				Benzene	
75274				Bromodichloromethane	
75150		0.001		Carbon disulfide	
108907				Chlorobenzene	
67663				Chloroform	
110827				Cyclohexane	
124481				Chlorodibromomethane	
64175		0.011		Ethanol (as methane)	
100441				Ethylbenzene	
75694				Trichlorofluoromethane	
76131		0.014		1,1,2-Trichloro-1,2,2-trifluoroethane	
76142				Dichlorotetrafluoroethane (F114)	
75718		0.017		Dichlorodifluoromethane	
142825				Heptane	
110543				Hexane	
1634044				MTBE	
75092				Methylene chloride	
103651				n-Propylbenzene	
100425				Styrene	
127184		0.004		Tetrachloroethylene	
109999				Tetrahydrofuran	
108883				Toluene	
79016				Trichloroethylene	
106423		0.002		p-Xylene	
95476		0.003		o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Totals must add up to value of L_s (cell F24) ENTER Thickness of soil stratum A, h_A (cm)			ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5				s		

ENTER Stratum A SCS soil type		ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)		ENTER Stratum A soil total porosity, n^A (unitless)		ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)		ENTER Stratum B SCS soil type		ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)		ENTER Stratum B soil total porosity, n^B (unitless)		ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)		ENTER Stratum C SCS soil type	
5' bgs																	
Lookup Soil Parameters																	
	1.70		0.367		0.136												

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	
10	40	1000	1000	244	0.1	0.5	5	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)				
70	30	30	350				

Exposure duration, τ	Source-building separation, L_T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. Soil gas rate, $Q_{building}$ (cm ³ /s)
		soil	soil	soil	soil	effective	total fluid	intrinsic	relative air	effective vapor	seam	Soil	ventilation		
		porosity,	porosity,	porosity,	porosity,	saturation,	permeability,	permeability,	permeability,	permeability,	perimeter,	gas	rate,		
S_{te} (cm ³ /cm ³)	k_i (cm ²)	k_g (cm ²)	k_v (cm ²)	X_{crack} (cm)	conc. ($\mu\text{g}/\text{m}^3$)										
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2,4-Trimethylbenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3,5-Trimethylbenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.1E+00	3.4E+04	2-Butanone			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Hexanone			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	2-Propanol			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Ethyltoluene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Acetone			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+01	3.4E+04	Benzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.4E+00	3.4E+04	Carbon disulfide			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chloroform			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Cyclohexane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.1E+01	3.4E+04	Ethanol (as methanol)			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Ethylbenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Trichlorofluoromethane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.1E+02	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Dichlorotetrafluoroethane (f 114)			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.6E+01	3.4E+04	Dichlorodifluoromethane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Heptane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Hexane			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	MTBE			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Methylene chloride			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Styrene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.0E+01	3.4E+04	Tetrachloroethylene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Tetrahydrofuran			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	Toluene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.6E+00	3.4E+04	Trichloroethylene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.5E+01	3.4E+04	p-Xylene			
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04	o-Xylene			

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)				
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00	2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA 1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05 8.0E-01
15	8.1E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	6.0E-03	6.0E-06	NA 5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA 9.1E-03
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	2.2E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	2.1E-02	2.1E-05	NA 3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05 6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05 7.0E-02
15	4.4E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	3.8E-03	3.8E-06	NA 8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA 1.0E+00
15	0.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	0.0E+00		5.3E-06 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	0.0E+00		NA 6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05 7.0E-02
15	2.1E+01	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	2.5E-02	2.5E-05	NA 1.8E+00
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	0.0E+00		NA 2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA 7.0E-01
15	1.1E+02	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	7.8E-02	7.8E-05	NA 3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	8.6E+01	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	5.4E-02	5.4E-05	NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA 7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07 8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06 4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA 1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA 9.0E-01
15	3.0E+01	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	2.0E-02	2.0E-05	5.9E-06 3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	0.0E+00		NA 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06 6.0E-01
15	6.6E+00	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	4.7E-03	4.7E-06	NA 7.0E-01
15	1.5E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.2E-02	1.2E-05	NA 7.0E-01
										o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		OffSite 5 ft bgs, VW-13	
				Chemical	
95636				1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678				1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933		0.002		2-Butanone	
591786				2-Hexanone	
67630		0.013		2-Propanol	
622968				4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641		0.007		Acetone	
71432		0.005		Benzene	
75274				Bromodichloromethane	
75150		0.014		Carbon disulfide	
108907		0.001		Chlorobenzene	
67663		0.002		Chloroform	
110827		0.009		Cyclohexane	
124481				Chlorodibromomethane	
64175				Ethanol (as methane)	
100441		0.003		Ethylbenzene	
75694		0.003		Trichlorofluoromethane	
76131				1,1,2-Trichloro-1,2,2-trifluoroethane	
76142				Dichlorotetrafluoroethane (F114)	
75718		0.001		Dichlorodifluoromethane	
142825				Heptane	
110543		0.011		Hexane	
1634044				MTBE	
75092		0.002		Methylene chloride	
103651				n-Propylbenzene	
100425				Styrene	
127184		0.003		Tetrachloroethylene	
109999				Tetrahydrofuran	
108883		0.015		Toluene	
79016		0.004		Trichloroethylene	
106423		0.004		p-Xylene	
95476		0.003		o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	OR

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
			0.136					
	1.70	0.367						

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	
70	30	30	350	

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclét number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)				
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04 NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA 1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05 8.0E-01
15	5.4E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	4.0E-03	4.0E-06	NA 5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	3.3E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	2.5E-02	2.5E-05	NA 9.1E-03
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA 3.0E+00
15	1.7E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.7E-02	1.7E-05	NA 3.2E+00
15	1.6E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	1.3E-02	1.3E-05	2.9E-05 6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05 7.0E-02
15	4.4E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	3.8E-02	3.8E-05	NA 8.0E-01
15	5.6E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	3.8E-03	3.8E-06	NA 1.0E+00
15	1.1E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	9.9E-03	9.9E-06	5.3E-06 3.0E-01
15	3.2E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	2.2E-02	2.2E-05	NA 6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05 7.0E-02
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA 1.8E+00
15	1.2E+01	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	8.3E-03	8.3E-06	NA 2.0E+00
15	1.5E+01	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	1.2E-02	1.2E-05	NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA 3.0E+01
15	6.6E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	4.2E-03	4.2E-06	NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA 7.0E+00
15	4.0E+01	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	5.0E-02	5.0E-05	NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07 8.0E+00
15	6.7E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	5.7E-03	5.7E-06	1.0E-06 4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA 1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA 9.0E-01
15	1.8E+01	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	1.2E-02	1.2E-05	5.9E-06 3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06 3.0E-01
15	5.8E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	4.4E-02	4.4E-05	NA 3.0E-01
15	2.3E+01	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	1.7E-02	1.7E-05	2.0E-06 6.0E-01
15	1.9E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	1.3E-02	1.3E-05	NA 7.0E-01
15	1.3E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	9.9E-03	9.9E-06	NA 7.0E-01
15										o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER	ENTER	ENTER																																								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	OffSite 5 ft bgs, VW-14																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
1,2,4-Trimethylbenzene																																										
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Tetrahydrofuran																																										
Toluene																																										
Trichloroethylene																																										
p-Xylene																																										
o-Xylene																																										
95636			0.005																																							
95501			0.026																																							
108678			0.002																																							
106990																																										
541731																																										
106467			0.004																																							
78933			0.003																																							
591786																																										
67630																																										
622968			0.001																																							
108101																																										
67641			0.006																																							
71432			0.004																																							
75274																																										
75150			0.005																																							
108907																																										
67663			0.002																																							
110827			0.002																																							
124481																																										
64175																																										
100441																																										
75694																																										
76131			0.006																																							
76142																																										
75718			0.014																																							
142825																																										
110543			0.004																																							
1634044																																										
75092																																										
103651																																										
100425																																										
127184			0.001																																							
109999																																										
108883			0.006																																							
79016																																										
106423			0.004																																							
95476			0.002																																							
			0.001																																							

ENTER	ENTER	ENTER					
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	
5' bgs							
ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)
				ENTER Lookup Soil Parameters			ENTER Lookup Soil Parameters
	1.70	0.367	0.136				
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5
ENTER	ENTER	ENTER	ENTER				
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)				
70	30	30	350				

		Stratum A	Stratum B	Stratum C	Stratum A	Stratum A	Stratum A	Floor-		Bldg.	
Exposure duration,	Source-building separation,	soil porosity,	soil porosity,	soil porosity,	effective total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	seam perimeter,	Soil gas conc.	ventilation rate,
τ (sec)	L_T (cm)	θ_a^A (cm^3/cm^3)	θ_a^B (cm^3/cm^3)	θ_a^C (cm^3/cm^3)	S_{te} (cm^3/cm^3)	k_i (cm^2)	k_g (cm^2)	k_v (cm^2)	X_{crack} (cm)	Q_{building} ($\mu\text{g}/\text{m}^3$)	(cm^3/s)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.6E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.6E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.1E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.4E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.0E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	5.8E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.6E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.5E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.5E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.4E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.8E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.1E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.4E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	9.7E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.9E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.4E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.2E+00	3.4E+04

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclat number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)			
15	2.6E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	1.5E-02	1.5E-05	NA	6.0E-03 1,2,4-Trimethylbenzene
15	1.6E+02	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	1.0E-01	1.0E-04	NA	2.0E-01 1,2-Dichlorobenzene
15	1.1E+01	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	6.2E-03	6.2E-06	NA	6.0E-03 1,3,5-Trimethylbenzene
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA 1,3-Butadiene
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01 1,3-Dichlorobenzene
15	2.4E+01	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	1.6E-02	1.6E-05	1.1E-05	8.0E-01 1,4-Dichlorobenzene
15	1.0E+01	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	7.5E-03	7.5E-06	NA	5.0E+00 2-Butanone
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00 2-Hexanone
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03 2-Propanol
15	5.8E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	3.8E-03	3.8E-06	NA	7.0E-01 4-Ethyltoluene
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00 4-Methyl-2-pentanone
15	1.6E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.5E-02	1.5E-05	NA	3.2E+00 Acetone
15	1.2E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	9.3E-03	9.3E-06	2.9E-05	6.0E-02 Benzene
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02 Bromodichloromethane
15	1.5E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	1.3E-02	1.3E-05	NA	8.0E-01 Carbon disulfide
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00 Chlorobenzene
15	8.5E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	7.3E-03	7.3E-06	5.3E-06	3.0E-01 Chloroform
15	7.4E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	5.0E-03	5.0E-06	NA	6.0E+00 Cyclohexane
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02 Chlorodibromomethane
15	0.0E+00	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	0.0E+00		NA	1.8E+00 Ethanol (as methanol)
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	0.0E+00		NA	2.0E+00 Ethylbenzene
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01 Trichlorofluoromethane
15	4.8E+01	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	3.4E-02	3.4E-05	NA	3.0E+01 1,1,2-Trichloro-1,2,2-trifluoroethane
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01 Dichlorotetrafluoroethane (f 114)
15	7.1E+01	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	4.5E-02	4.5E-05	NA	2.0E-01 Dichlorodifluoromethane
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00 Heptane
15	1.4E+01	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	1.8E-02	1.8E-05	NA	2.0E-01 Hexane
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00 MTBE
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01 Methylene chloride
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01 n-Propylbenzene
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01 Styrene
15	9.7E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	6.5E-03	6.5E-06	5.9E-06	3.5E-02 Tetrachloroethylene
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01 Tetrahydrofuran
15	2.2E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.7E-02	1.7E-05	NA	3.0E-01 Toluene
15	1.9E+01	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	1.4E-02	1.4E-05	2.0E-06	6.0E-01 Trichloroethylene
15	8.4E+00	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	5.9E-03	5.9E-06	NA	7.0E-01 p-Xylene
15	6.2E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	4.8E-03	4.8E-06	NA	7.0E-01 o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER	ENTER	ENTER																																								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	OffSite 10ft bgs, VW-1B																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
1,2,4-Trimethylbenzene																																										
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Toluene																																										
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p-Xylene																																										
o-Xylene																																										
95636			0.005																																							
95501																																										
108678			0.002																																							
106990																																										
541731																																										
106467																																										
78933			0.004																																							
591786																																										
67630																																										
622968			0.005																																							
108101																																										
67641			0.035																																							
71432			0.003																																							
75274																																										
75150			0.003																																							
108907																																										
67663			0.004																																							
110827			0.006																																							
124481																																										
64175																																										
100441			0.015																																							
75694																																										
76131																																										
76142																																										
75718																																										
142825			0.004																																							
110543			0.005																																							
1634044																																										
75092			0.001																																							
103651																																										
100425																																										
127184			0.003																																							
109999																																										
108883			0.320																																							
79016																																										
106423			0.045																																							
95476			0.019																																							

ENTER	ENTER	ENTER			
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	ENTER	ENTER	ENTER
			Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)
15	305	19	305		

ENTER	ENTER	ENTER			
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	ENTER	ENTER	ENTER
			Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)
				Lookup Soil Parameters	ρ_b^B (g/cm^3)
			0.129		n^B (unitless)
					θ_w^B (cm^3/cm^3)
			1.71	0.365	

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)		
70	30	30	350		

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall		Bldg.	
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	Soil Q _{building}	ventilation rate,	
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	(cm^3/s)	(cm^3/s)	(cm^3/s)	(cm)	$(\mu\text{g}/\text{m}^3)$	(cm^3/s)		
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	2.7E+01	3.4E+04	1,2,4-Trimethylbenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	1.2E+01	3.4E+04	1,3,5-Trimethylbenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	1.1E+01	3.4E+04	2-Butanone					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	2-Hexanone					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	2-Propanol					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	2.3E+01	3.4E+04	4-Ethyltoluene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	8.5E+01	3.4E+04	Acetone					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	9.4E+00	3.4E+04	Benzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	8.6E+00	3.4E+04	Carbon disulfide					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	2.0E+01	3.4E+04	Chloroform					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	2.2E+01	3.4E+04	Cyclohexane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Ethanol (as methanol)					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	6.6E+01	3.4E+04	Ethylbenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Trichlorofluoromethane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Dichlorotetrafluoroethane (f 114)					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Dichlorodifluoromethane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	1.8E+01	3.4E+04	Heptane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	1.7E+01	3.4E+04	Hexane					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	MTBE					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	5.0E+00	3.4E+04	Methylene chloride					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Styrene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	2.3E+01	3.4E+04	Tetrachloroethylene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Tetrahydrofuran					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	1.2E+03	3.4E+04	Toluene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	0.0E+00	3.4E+04	Trichloroethylene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	2.0E+02	3.4E+04	p-Xylene					
9.5E+08	290	0.236	ERROR	ERROR	0.244	1.0E-07	0.722	7.3E-08	4,000	8.4E+01	3.4E+04	o-Xylene					

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 290
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 290
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 290
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 290
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 290
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 290
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 290
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 290
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 290
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 290
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 290
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.7E-03	0.0E+00	0.0E+00	7.7E-03 290
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 290
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 290
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.4E-03	0.0E+00	0.0E+00	6.4E-03 290
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 290
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.4E-03	0.0E+00	0.0E+00	6.4E-03 290
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 290
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 290
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 290
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 290
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 290
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 290
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 290
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 290
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 290
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 290
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 290
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 290
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 290
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 290
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 290
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 290
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 290
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 290
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 290
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 290

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)			
15	2.7E+01	0.10	8.3E+01	3.7E-03	4.0E+02	4.8E+243	3.4E-04	9.2E-03	9.2E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	9.4E+213	3.8E-04	0.0E+00		NA	2.0E-01
15	1.2E+01	0.10	8.3E+01	3.7E-03	4.0E+02	2.0E+245	3.4E-04	4.1E-03	4.1E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	2.0E+59	9.9E-04	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	2.4E+213	3.9E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	9.7E+213	3.8E-04	0.0E+00		1.1E-05	8.0E-01
15	1.1E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.2E+181	4.4E-04	5.1E-03	5.1E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.8E+196	4.1E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	2.1E+173	4.6E-04	0.0E+00		NA	9.1E-03
15	2.3E+01	0.10	8.3E+01	4.3E-03	4.0E+02	9.2E+210	3.9E-04	9.0E-03	9.0E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.8E+196	4.1E-04	0.0E+00		NA	3.0E+00
15	8.5E+01	0.10	8.3E+01	7.7E-03	4.0E+02	8.6E+117	6.2E-04	5.3E-02	5.3E-05	NA	3.2E+00
15	9.4E+00	0.10	8.3E+01	5.4E-03	4.0E+02	6.4E+167	4.7E-04	4.4E-03	4.4E-06	2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	1.8E-04	0.0E+00		3.7E-05	7.0E-02
15	8.6E+00	0.10	8.3E+01	6.4E-03	4.0E+02	1.0E+142	5.4E-04	4.6E-03	4.6E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	1.9E+202	4.0E-04	0.0E+00		NA	1.0E+00
15	2.0E+01	0.10	8.3E+01	6.4E-03	4.0E+02	9.7E+141	5.4E-04	1.1E-02	1.1E-05	5.3E-06	3.0E-01
15	2.2E+01	0.10	8.3E+01	4.5E-03	4.0E+02	8.5E+200	4.1E-04	9.1E-03	9.1E-06	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.2E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	1.0E-02	4.0E+02	1.7E+88	7.6E-04	0.0E+00		NA	1.8E+00
15	6.6E+01	0.10	8.3E+01	4.6E-03	4.0E+02	7.9E+196	4.1E-04	2.7E-02	2.7E-05	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	5.6E+169	4.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.2E+189	4.3E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.2E+189	4.3E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.2E+222	3.7E-04	0.0E+00		NA	2.0E-01
15	1.8E+01	0.10	8.3E+01	5.7E-03	4.0E+02	3.1E+159	4.9E-04	8.8E-03	8.8E-06	NA	7.0E+00
15	1.7E+01	0.10	8.3E+01	1.2E-02	4.0E+02	6.9E+73	8.6E-04	1.5E-02	1.5E-05	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	1.3E+144	5.3E-04	0.0E+00		2.6E-07	8.0E+00
15	5.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	1.5E+146	5.3E-04	2.6E-03	2.6E-06	1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	5.2E+245	3.4E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	9.2E+207	3.9E-04	0.0E+00		NA	9.0E-01
15	2.3E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.3E+205	4.0E-04	9.1E-03	9.1E-06	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	8.4E+149	5.1E-04	0.0E+00		1.9E-06	3.0E-01
15	1.2E+03	0.10	8.3E+01	5.3E-03	4.0E+02	5.5E+169	4.7E-04	5.7E-01	5.7E-04	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	8.6E+186	4.3E-04	0.0E+00		2.0E-06	6.0E-01
15	2.0E+02	0.10	8.3E+01	4.7E-03	4.0E+02	1.1E+192	4.2E-04	8.4E-02	8.4E-05	NA	7.0E-01
15	8.4E+01	0.10	8.3E+01	5.3E-03	4.0E+02	5.4E+169	4.7E-04	3.9E-02	3.9E-05	NA	7.0E-01

SG-ADV
Version 2.0; 02/03

Soil Gas Concentration Data				
ENTER	ENTER	ENTER		
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	
95636			0.004	1,2,4-Trimethylbenzene
95501			0.002	1,2-Dichlorobenzene
108678			0.001	1,3,5-Trimethylbenzene
106990				1,3-Butadiene
541731			0.002	1,3-Dichlorobenzene
106467				1,4-Dichlorobenzene
78933			0.004	2-Butanone
591786				2-Hexanone
67630			0.008	2-Propanol
622968			0.003	4-Ethyltoluene
108101				4-Methyl-2-pentanone
67641			0.011	Acetone
71432			0.006	Benzene
75274				Bromodichloromethane
75150			0.013	Carbon disulfide
108907				Chlorobenzene
67663				Chloroform
110827				Cyclohexane
124481				Chlorodibromomethane
64175				Ethanol (as methane)
100441			0.004	Ethylbenzene
75694				Trichlorofluoromethane
76131			0.002	1,1,2-Trichloro-1,2,2-trifluoroethane
76142				Dichlorotetrafluoroethane (F114)
75718			0.003	Dichlorodifluoromethane
142825				Heptane
110543			0.003	Hexane
1634044				MTBE
75092				Methylene chloride
103651				n-Propylbenzene
100425				Styrene
127184			0.088	Tetrachloroethylene
109999				Tetrahydrofuran
108883			0.023	Toluene
79016			0.002	Trichloroethylene
106423			0.016	p-Xylene
95476			0.005	o-Xylene

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)	OR
15	305	19	305			s		

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum C SCS soil type
				Lookup Soil Parameters				Lookup Soil Parameters

1.71	0.365	0.129						
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	

10	40	1000	1000	244	0.1	0.5	5
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_c (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)				

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 290
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 290
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 290
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 290
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 290
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 290
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 290
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 290
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 290
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 290
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 290
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.7E-03	0.0E+00	0.0E+00	7.7E-03 290
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 290
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 290
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.4E-03	0.0E+00	0.0E+00	6.4E-03 290
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 290
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.4E-03	0.0E+00	0.0E+00	6.4E-03 290
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 290
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 290
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 290
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 290
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 290
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 290
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 290
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 290
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 290
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 290
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 290
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 290
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 290
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 290
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 290
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 290
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 290
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 290
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 290
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 290

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Radius, r _{crack} (cm)	Average vapor flow rate Q _{soil} (cm^3/s)	Crack effective diffusion coefficient, D ^{crack} (cm^2/s)	Area of crack, A _{crack} (cm^2)	Exponent of equivalent foundation Pelet number, exp(Pe ^l) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
15	1.8E+01	0.10	8.3E+01	3.7E-03	4.0E+02	4.8E+243	3.4E-04	6.0E-03	6.0E-06	NA	6.0E-03
15	9.8E+00	0.10	8.3E+01	4.2E-03	4.0E+02	9.4E+213	3.8E-04	3.8E-03	3.8E-06	NA	2.0E-01
15	7.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	2.0E+245	3.4E-04	2.4E-03	2.4E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	2.0E+59	9.9E-04	0.0E+00		2.8E-04	NA
15	9.8E+00	0.10	8.3E+01	4.2E-03	4.0E+02	2.4E+213	3.9E-04	3.8E-03	3.8E-06	NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	9.7E+213	3.8E-04	0.0E+00		1.1E-05	8.0E-01
15	1.2E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.2E+181	4.4E-04	5.5E-03	5.5E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.8E+196	4.1E-04	0.0E+00		NA	3.0E+00
15	2.1E+01	0.10	8.3E+01	5.2E-03	4.0E+02	2.1E+173	4.6E-04	9.4E-03	9.4E-06	NA	9.1E-03
15	1.3E+01	0.10	8.3E+01	4.3E-03	4.0E+02	9.2E+210	3.9E-04	5.0E-03	5.0E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.8E+196	4.1E-04	0.0E+00		NA	3.0E+00
15	2.7E+01	0.10	8.3E+01	7.7E-03	4.0E+02	8.6E+117	6.2E-04	1.7E-02	1.7E-05	NA	3.2E+00
15	2.0E+01	0.10	8.3E+01	5.4E-03	4.0E+02	6.4E+167	4.7E-04	9.2E-03	9.2E-06	2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	1.8E-04	0.0E+00		3.7E-05	7.0E-02
15	4.1E+01	0.10	8.3E+01	6.4E-03	4.0E+02	1.0E+142	5.4E-04	2.2E-02	2.2E-05	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	1.9E+202	4.0E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	6.4E-03	4.0E+02	9.7E+141	5.4E-04	0.0E+00		5.3E-06	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	8.5E+200	4.1E-04	0.0E+00		NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.2E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	1.0E-02	4.0E+02	1.7E+88	7.6E-04	0.0E+00		NA	1.8E+00
15	1.8E+01	0.10	8.3E+01	4.6E-03	4.0E+02	7.9E+196	4.1E-04	7.5E-03	7.5E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	5.6E+169	4.7E-04	0.0E+00		NA	7.0E-01
15	1.7E+01	0.10	8.3E+01	4.8E-03	4.0E+02	2.2E+189	4.3E-04	7.3E-03	7.3E-06	NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.2E+189	4.3E-04	0.0E+00		NA	3.0E+01
15	1.5E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.2E+222	3.7E-04	5.6E-03	5.6E-06	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	3.1E+159	4.9E-04	0.0E+00		NA	7.0E+00
15	9.3E+00	0.10	8.3E+01	1.2E-02	4.0E+02	6.9E+73	8.6E-04	8.0E-03	8.0E-06	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	1.3E+144	5.3E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	1.5E+146	5.3E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	5.2E+245	3.4E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	9.2E+207	3.9E-04	0.0E+00		NA	9.0E-01
15	6.1E+02	0.10	8.3E+01	4.4E-03	4.0E+02	1.3E+205	4.0E-04	2.4E-01	2.4E-04	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	8.4E+149	5.1E-04	0.0E+00		1.9E-06	3.0E-01
15	8.8E+01	0.10	8.3E+01	5.3E-03	4.0E+02	5.5E+169	4.7E-04	4.1E-02	4.1E-05	NA	3.0E-01
15	8.2E+00	0.10	8.3E+01	4.8E-03	4.0E+02	8.6E+186	4.3E-04	3.5E-03	3.5E-06	2.0E-06	6.0E-01
15	7.1E+01	0.10	8.3E+01	4.7E-03	4.0E+02	1.1E+192	4.2E-04	3.0E-02	3.0E-05	NA	7.0E-01
15	2.2E+01	0.10	8.3E+01	5.3E-03	4.0E+02	5.4E+169	4.7E-04	1.0E-02	1.0E-05	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03				
ENTER	ENTER	ENTER						
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	Soil gas conc., C_g (ppmv)	OR	OffSite 10ft bgs, VW-8B				
				Chemical				
95636				1,2,4-Timethylbenzene				
95501				1,2-Dichlorobenzene				
108678				1,3,5-Trimethylbenzene				
106990				1,3-Butadiene				
541731				1,3-Dichlorobenzene				
106467				1,4-Dichlorobenzene				
78933		0.003		2-Butanone				
591786				2-Hexanone				
67630				2-Propanol				
622968				4-Ethyltoluene				
108101				4-Methyl-2-pentanone				
67641		0.008		Acetone				
71432				Benzene				
75274				Bromodichloromethane				
75150		0.002		Carbon disulfide				
108907				Chlorobenzene				
67663		0.005		Chloroform				
110827		0.002		Cyclohexane				
124481				Chlorodibromomethane				
64175		0.010		Ethanol (as methanol)				
100414				Ethylbenzene				
75694				Trichlorofluoromethane				
76131				1,1,2-Trichloro-1,2,2-trifluoroethane				
76142				Dichlorotetrafluoroethane (f 114)				
75718		0.002		Dichlorodifluoromethane				
142825		0.001		Heptane				
110543				Hexane				
1634044				MTBE				
75092				Methylene chloride				
103651				n-Propylbenzene				
100425				Styrene				
127184		0.002		Tetrachloroethylene				
109999				Tetrahydrofuran				
108883		0.017		Toluene				
79016				Trichloroethylene				
106423				p-Xylene				
95476				o-Xylene				
ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (cm)	ENTER Thickness of soil stratum C, h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER OR User-defined stratum A soil vapor permeability, k_v (cm^2)	
15	305	19	305			s		
ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER 10' bgs Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
	1.71	0.365	0.129					
ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER space floor length, L_B (cm)	ENTER space width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg OR Leave blank to calculate Q_{soil} (L/m)	
10	40	1000	1000	244	0.1	0.5	5	
ENTER Averaging time for carcinogens, AT_c (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)					
70	30	30	350					

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum A			Stratum B			Stratum C			Total overall path length, L _d (cm)
							Stratum coefficient, D ^{eff} _A	Stratum coefficient, D ^{eff} _B	Stratum coefficient, D ^{eff} _C	Stratum coefficient, D ^{eff} _T						
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03	0.0E+00	0.0E+00	3.7E-03	0.0E+00	290	1,2,4-Trimethylbenzene
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03	0.0E+00	0.0E+00	4.2E-03	0.0E+00	290	1,2-Dichlorobenzene
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03	0.0E+00	0.0E+00	3.7E-03	0.0E+00	290	1,3,5-Trimethylbenzene
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02	0.0E+00	0.0E+00	1.5E-02	0.0E+00	290	1,3-Butadiene
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03	0.0E+00	0.0E+00	4.2E-03	0.0E+00	290	1,3-Dichlorobenzene
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03	0.0E+00	0.0E+00	4.2E-03	0.0E+00	290	1,4-Dichlorobenzene
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03	0.0E+00	0.0E+00	5.0E-03	0.0E+00	290	2-Butanone
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03	0.0E+00	0.0E+00	4.6E-03	0.0E+00	290	2-Hexanone
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03	0.0E+00	0.0E+00	5.2E-03	0.0E+00	290	2-Propanol
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03	0.0E+00	0.0E+00	4.3E-03	0.0E+00	290	4-Ethyltoluene
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03	0.0E+00	0.0E+00	4.6E-03	0.0E+00	290	4-Methyl-2-pentanone
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.7E-03	0.0E+00	0.0E+00	7.7E-03	0.0E+00	0.0E+00	7.7E-03	0.0E+00	290	Acetone
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03	0.0E+00	0.0E+00	5.4E-03	0.0E+00	290	Benzene
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03	0.0E+00	0.0E+00	1.8E-03	0.0E+00	290	Bromodichloromethane
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.4E-03	0.0E+00	0.0E+00	6.4E-03	0.0E+00	0.0E+00	6.4E-03	0.0E+00	290	Carbon disulfide
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03	0.0E+00	0.0E+00	4.5E-03	0.0E+00	290	Chlorobenzene
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.4E-03	0.0E+00	0.0E+00	6.4E-03	0.0E+00	0.0E+00	6.4E-03	0.0E+00	290	Chloroform
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03	0.0E+00	0.0E+00	4.5E-03	0.0E+00	290	Cyclohexane
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03	0.0E+00	0.0E+00	1.2E-03	0.0E+00	290	Chlorodibromomethane
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02	0.0E+00	0.0E+00	1.0E-02	0.0E+00	290	Ethanol (as methanol)
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03	0.0E+00	0.0E+00	4.6E-03	0.0E+00	290	Ethylbenzene
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03	0.0E+00	0.0E+00	5.3E-03	0.0E+00	290	Trichlorofluoromethane
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03	0.0E+00	0.0E+00	4.8E-03	0.0E+00	290	1,1,2-Trichloro-1,2,2-trifluoroethane
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03	0.0E+00	0.0E+00	4.8E-03	0.0E+00	290	Dichlorotetrafluoroethane (f 114)
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03	0.0E+00	0.0E+00	4.1E-03	0.0E+00	290	Dichlorodifluoromethane
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03	0.0E+00	0.0E+00	5.7E-03	0.0E+00	290	Heptane
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02	0.0E+00	0.0E+00	1.2E-02	0.0E+00	290	Hexane
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03	0.0E+00	0.0E+00	6.3E-03	0.0E+00	290	MTBE
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03	0.0E+00	0.0E+00	6.2E-03	0.0E+00	290	Methylene chloride
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03	0.0E+00	0.0E+00	3.7E-03	0.0E+00	290	n-Propylbenzene
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03	0.0E+00	0.0E+00	4.4E-03	0.0E+00	290	Styrene
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03	0.0E+00	0.0E+00	4.4E-03	0.0E+00	290	Tetrachloroethylene
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03	0.0E+00	0.0E+00	6.0E-03	0.0E+00	290	Tetrahydrofuran
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03	0.0E+00	0.0E+00	5.3E-03	0.0E+00	290	Toluene
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03	0.0E+00	0.0E+00	4.8E-03	0.0E+00	290	Trichloroethylene
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03	0.0E+00	0.0E+00	4.7E-03	0.0E+00	290	p-Xylene
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03	0.0E+00	0.0E+00	5.3E-03	0.0E+00	290	o-Xylene

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)		
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	4.8E+243	3.4E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	9.4E+213	3.8E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	2.0E+245	3.4E-04	0.0E+00		NA 6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	2.0E+59	9.9E-04	0.0E+00	2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	2.4E+213	3.9E-04	0.0E+00		NA 1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	9.7E+213	3.8E-04	0.0E+00		1.1E-05 8.0E-01
15	9.3E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.2E+181	4.4E-04	4.1E-03	4.1E-06	NA 5.0E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.8E+196	4.1E-04	0.0E+00		NA 3.0E+00
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	2.1E+173	4.6E-04	0.0E+00		NA 9.1E-03
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	9.2E+210	3.9E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	1.8E+196	4.1E-04	0.0E+00		NA 3.0E+00
15	1.9E+01	0.10	8.3E+01	7.7E-03	4.0E+02	8.6E+117	6.2E-04	1.2E-02	1.2E-05	NA 3.2E+00
15	0.0E+00	0.10	8.3E+01	5.4E-03	4.0E+02	6.4E+167	4.7E-04	0.0E+00		2.9E-05 6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	1.8E-04	0.0E+00		3.7E-05 7.0E-02
15	5.7E+00	0.10	8.3E+01	6.4E-03	4.0E+02	1.0E+142	5.4E-04	3.1E-03	3.1E-06	NA 8.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	1.9E+202	4.0E-04	0.0E+00		NA 1.0E+00
15	2.4E+01	0.10	8.3E+01	6.4E-03	4.0E+02	9.7E+141	5.4E-04	1.3E-02	1.3E-05	5.3E-06 3.0E-01
15	6.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	8.5E+200	4.1E-04	2.4E-03	2.4E-06	NA 6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.2E-04	0.0E+00		2.7E-05 7.0E-02
15	1.9E+01	0.10	8.3E+01	1.0E-02	4.0E+02	1.7E+88	7.6E-04	1.4E-02	1.4E-05	NA 1.8E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	7.9E+196	4.1E-04	0.0E+00		NA 2.0E+00
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	5.6E+169	4.7E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.2E+189	4.3E-04	0.0E+00		NA 3.0E+01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.2E+189	4.3E-04	0.0E+00		NA 3.0E+01
15	7.6E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.2E+222	3.7E-04	2.8E-03	2.8E-06	NA 2.0E-01
15	5.4E+00	0.10	8.3E+01	5.7E-03	4.0E+02	3.1E+159	4.9E-04	2.7E-03	2.7E-06	NA 7.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-02	4.0E+02	6.9E+73	8.6E-04	0.0E+00		NA 2.0E-01
15	0.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	1.3E+144	5.3E-04	0.0E+00		2.6E-07 8.0E+00
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	1.5E+146	5.3E-04	0.0E+00		1.0E-06 4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	5.2E+245	3.4E-04	0.0E+00		NA 1.4E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	9.2E+207	3.9E-04	0.0E+00		NA 9.0E-01
15	1.3E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.3E+205	4.0E-04	5.2E-03	5.2E-06	5.9E-06 3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	8.4E+149	5.1E-04	0.0E+00		1.9E-06 3.0E-01
15	6.5E+01	0.10	8.3E+01	5.3E-03	4.0E+02	5.5E+169	4.7E-04	3.0E-02	3.0E-05	NA 3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	8.6E+186	4.3E-04	0.0E+00		2.0E-06 6.0E-01
15	0.0E+00	0.10	8.3E+01	4.7E-03	4.0E+02	1.1E+192	4.2E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	5.4E+169	4.7E-04	0.0E+00		NA 7.0E-01
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02					o-Xylene

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER	ENTER	ENTER																																								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	Property Boundary 8' bgs, PVP-1A																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
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95501																																										
108678																																										
106990																																										
541731																																										
106467																																										
78933			0.054																																							
591786																																										
67630																																										
622968																																										
108101																																										
67641			0.087																																							
71432																																										
75274																																										
75150			0.004																																							
108907																																										
67663																																										
110827			0.024																																							
124481																																										
64175			0.010																																							
100441																																										
75694																																										
76131			0.034																																							
76142			0.012																																							
75718			0.058																																							
142825			0.007																																							
110543			0.002																																							
1634044																																										
75092			0.013																																							
103651																																										
100425																																										
127184			0.002																																							
109999																																										
108883			0.008																																							
79016																																										
106423			0.002																																							
95476																																										

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)
15	244	19	244			s	

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)
				Lookup Soil Parameters			Lookup Soil Parameters
	1.71	0.366	0.130				

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER	ENTER		
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)		
70	30	30	350		

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	$(\mu\text{g}/\text{m}^3)$	$Q_{building}$ (cm^3/s)				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.0E+00	3.4E+04				1,2,4-Trimethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,2-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3,5-Trimethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3-Butadiene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,4-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.6E+02	3.4E+04				2-Butanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				2-Hexanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				2-Propanol
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				4-Ethyltoluene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				4-Methyl-2-pentanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Acetone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Benzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Bromodichloromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.1E+01	3.4E+04				Carbon disulfide
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Chlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Chloroform
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.4E+01	3.4E+04				Cyclohexane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Chlorodibromomethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.8E+01	3.4E+04				Ethanol (as methanol)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Ethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Trichlorofluoromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.7E+02	3.4E+04				1,1,2-Trichloro-1,2,2-trifluoroethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	9.4E+01	3.4E+04				Dichlorotetrafluoroethane (f 114)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.9E+02	3.4E+04				Dichlorodifluoromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.0E+01	3.4E+04				Heptane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.5E+00	3.4E+04				Hexane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	4.6E+01	3.4E+04				MTBE
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Methylene chloride
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				n-Propylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Styrene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.5E+01	3.4E+04				Tetrachloroethylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Tetrahydrofuran
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.9E+01	3.4E+04				Toluene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Trichloroethylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.0E+01	3.4E+04				p-Xylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				o-Xylene

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 229
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 229
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.6E-03	0.0E+00	0.0E+00	7.6E-03 229
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 229
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 229
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 229
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 229
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 229
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 229
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 229
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 229
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 229
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 229
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)			
15	8.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.0E+245	4.2E-04	3.4E-03	3.4E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	4.3E+246	4.2E-04	0.0E+00		NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	4.3E+59	1.1E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	3.5E+214	4.7E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		1.1E-05	8.0E-01
15	1.6E+02	0.10	8.3E+01	5.0E-03	4.0E+02	1.1E+182	5.3E-04	8.6E-02	8.6E-05	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	9.9E+173	5.5E-04	0.0E+00		NA	9.1E-03
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+212	4.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	2.1E+02	0.10	8.3E+01	7.6E-03	4.0E+02	3.6E+118	7.3E-04	1.5E-01	1.5E-04	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.4E-03	4.0E+02	5.3E+168	5.6E-04	0.0E+00		2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		3.7E-05	7.0E-02
15	1.1E+01	0.10	8.3E+01	6.3E-03	4.0E+02	6.0E+142	6.4E-04	7.1E-03	7.1E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	2.4E+203	4.9E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	5.8E+142	6.4E-04	0.0E+00		5.3E-06	3.0E-01
15	8.4E+01	0.10	8.3E+01	4.5E-03	4.0E+02	1.1E+202	4.9E-04	4.1E-02	4.1E-05	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.5E-04	0.0E+00		2.7E-05	7.0E-02
15	1.8E+01	0.10	8.3E+01	1.0E-02	4.0E+02	2.9E+88	8.9E-04	1.6E-02	1.6E-05	NA	1.8E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	9.5E+197	5.0E-04	0.0E+00		NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.8E+170	5.6E-04	0.0E+00		NA	7.0E-01
15	2.7E+02	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	1.4E-01	1.4E-04	NA	3.0E+01
15	9.4E+01	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	4.8E-02	4.8E-05	NA	3.0E+01
15	2.9E+02	0.10	8.3E+01	4.1E-03	4.0E+02	2.0E+223	4.5E-04	1.3E-01	1.3E-04	NA	2.0E-01
15	3.0E+01	0.10	8.3E+01	5.6E-03	4.0E+02	2.3E+160	5.9E-04	1.8E-02	1.8E-05	NA	7.0E+00
15	7.5E+00	0.10	8.3E+01	1.2E-02	4.0E+02	1.8E+74	9.9E-04	7.5E-03	7.5E-06	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	8.2E+144	6.3E-04	0.0E+00		2.6E-07	8.0E+00
15	4.6E+01	0.10	8.3E+01	6.2E-03	4.0E+02	9.8E+146	6.3E-04	2.9E-02	2.9E-05	1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.2E+247	4.2E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+209	4.8E-04	0.0E+00		NA	9.0E-01
15	1.5E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.7E+206	4.8E-04	7.0E-03	7.0E-06	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	5.4E+150	6.1E-04	0.0E+00		1.9E-06	3.0E-01
15	2.9E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.7E+170	5.6E-04	1.6E-02	1.6E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	9.1E+187	5.2E-04	0.0E+00		2.0E-06	6.0E-01
15	1.0E+01	0.10	8.3E+01	4.7E-03	4.0E+02	1.2E+193	5.1E-04	5.2E-03	5.2E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.6E+170	5.6E-04	0.0E+00		NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																																																																																																																																																																																																															
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Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)																																																																																																																																																																																																																																
Property Boundary 8' bgs, PVP-2A																																																																																																																																																																																																																																			
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Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s (°C)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)																																																																																																																																																																																																																												
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Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum C SCS soil type																																																																																																																																																																																																																											
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Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)																																																																																																																																																																																																																												
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Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)																																																																																																																																																																																																																																
70	30	30	350																																																																																																																																																																																																																																

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	$Q_{building}$					
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.4E+01	3.4E+04	1,2,4-Trimethylbenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	6.5E+00	3.4E+04	1,3,5-Trimethylbenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.0E+02	3.4E+04	2-Butanone			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.3E+01	3.4E+04	2-Hexanone			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	5.3E+01	3.4E+04	2-Propanol			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.1E+00	3.4E+04	4-Ethyltoluene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.1E+02	3.4E+04	Acetone			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Benzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.5E+01	3.4E+04	Carbon disulfide			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Chloroform			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Cyclohexane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Ethanol (as methanol)			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	4.9E+00	3.4E+04	Ethylbenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	9.2E+00	3.4E+04	Trichlorofluoromethane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.3E+03	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.2E+01	3.4E+04	Dichlorotetrafluoroethane (f 114)			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	4.7E+02	3.4E+04	Dichlorodifluoromethane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Heptane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Hexane			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	MTBE			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Methylene chloride			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Styrene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.5E+01	3.4E+04	Tetrachloroethylene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Tetrahydrofuran			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.1E+00	3.4E+04	Toluene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Trichloroethylene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.7E+01	3.4E+04	p-Xylene			
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.1E+01	3.4E+04	o-Xylene			

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 229
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 229
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.6E-03	0.0E+00	0.0E+00	7.6E-03 229
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 229
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 229
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 229
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 229
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 229
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 229
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 229
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 229
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 229
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 229
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	vapor flow rate into bldg., Q _{soil} (cm^3/s)	Crack effective diffusion coefficient, D ^{crack} (cm^2/s)	Area of crack, A _{crack} (cm^2)	Exponent of equivalent foundation Pelet number, exp(Pe ^f) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
15	1.4E+01	0.10	8.3E+01	3.7E-03	4.0E+02	1.0E+245	4.2E-04	5.9E-03	5.9E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		NA	2.0E-01
15	6.5E+00	0.10	8.3E+01	3.7E-03	4.0E+02	4.3E+246	4.2E-04	2.7E-03	2.7E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	4.3E+59	1.1E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	3.5E+214	4.7E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		1.1E-05	8.0E-01
15	3.0E+02	0.10	8.3E+01	5.0E-03	4.0E+02	1.1E+182	5.3E-04	1.6E-01	1.6E-04	NA	5.0E+00
15	2.3E+01	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	1.1E-02	1.1E-05	NA	3.0E+00
15	5.3E+01	0.10	8.3E+01	5.2E-03	4.0E+02	9.9E+173	5.5E-04	2.9E-02	2.9E-05	NA	9.1E-03
15	7.1E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+212	4.7E-04	3.3E-03	3.3E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	1.1E+02	0.10	8.3E+01	7.6E-03	4.0E+02	3.6E+118	7.3E-04	8.2E-02	8.2E-05	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.4E-03	4.0E+02	5.3E+168	5.6E-04	0.0E+00		2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		3.7E-05	7.0E-02
15	3.5E+01	0.10	8.3E+01	6.3E-03	4.0E+02	6.0E+142	6.4E-04	2.2E-02	2.2E-05	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	2.4E+203	4.9E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	5.8E+142	6.4E-04	0.0E+00		5.3E-06	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	1.1E+202	4.9E-04	0.0E+00		NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.5E-04	0.0E+00		2.7E-05	7.0E-02
15	0.0E+00	0.10	8.3E+01	1.0E-02	4.0E+02	2.9E+88	8.9E-04	0.0E+00		NA	1.8E+00
15	4.9E+00	0.10	8.3E+01	4.6E-03	4.0E+02	9.5E+197	5.0E-04	2.4E-03	2.4E-06	NA	2.0E+00
15	9.2E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.8E+170	5.6E-04	5.1E-03	5.1E-06	NA	7.0E-01
15	2.3E+03	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	1.2E+00	1.2E-03	NA	3.0E+01
15	7.2E+01	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	3.7E-02	3.7E-05	NA	3.0E+01
15	4.7E+02	0.10	8.3E+01	4.1E-03	4.0E+02	2.0E+223	4.5E-04	2.1E-01	2.1E-04	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	2.3E+160	5.9E-04	0.0E+00		NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-02	4.0E+02	1.8E+74	9.9E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	8.2E+144	6.3E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	9.8E+146	6.3E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.2E+247	4.2E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+209	4.8E-04	0.0E+00		NA	9.0E-01
15	2.5E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.7E+206	4.8E-04	1.2E-02	1.2E-05	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	5.4E+150	6.1E-04	0.0E+00		1.9E-06	3.0E-01
15	8.1E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.7E+170	5.6E-04	4.5E-03	4.5E-06	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	9.1E+187	5.2E-04	0.0E+00		2.0E-06	6.0E-01
15	1.7E+01	0.10	8.3E+01	4.7E-03	4.0E+02	1.2E+193	5.1E-04	8.8E-03	8.8E-06	NA	7.0E-01
15	1.1E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.6E+170	5.6E-04	6.2E-03	6.2E-06	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER	ENTER	ENTER																																								
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)	Property Boundary 8' bgs, PVP-3A																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
1,2,4-Trimethylbenzene																																										
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Tetrachloroethylene																																										
Tetrahydrofuran																																										
Toluene																																										
Trichloroethylene																																										
p-Xylene																																										
o-Xylene																																										
95636			0.006																																							
95501																																										
108678			0.004																																							
106990																																										
541731																																										
106467																																										
78933			0.035																																							
591786																																										
67630																																										
622968			0.004																																							
108101																																										
67641			0.015																																							
71432			0.002																																							
75274																																										
75150			0.009																																							
108907																																										
67663			0.001																																							
110827																																										
124481																																										
64175			0.050																																							
100441			0.003																																							
75694																																										
76131																																										
76142																																										
75718			0.002																																							
142825																																										
110543																																										
1634044																																										
75092																																										
103651																																										
100425																																										
127184			0.004																																							
109999																																										
108883			0.010																																							
79016																																										
106423																																										
95476			0.008																																							
			0.007																																							

ENTER	ENTER	ENTER					
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	244	19	244			s	

ENTER	ENTER	ENTER						
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum C SCS soil type
Lookup Soil Parameters			Lookup Soil Parameters					Lookup Soil Parameters
	1.71	0.366	0.130					

ENTER	ENTER	ENTER					
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER				
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)			
70	30	30	350			

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.	
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	$(\mu\text{g}/\text{m}^3)$	$Q_{building}$ (cm^3/s)				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.2E+01	3.4E+04				1,2,4-Trimethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,2-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.1E+01	3.4E+04				1,3,5-Trimethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3-Butadiene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,4-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.1E+02	3.4E+04				2-Butanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				2-Hexanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				2-Propanol
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.9E+01	3.4E+04				4-Ethyltoluene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				4-Methyl-2-pentanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.6E+01	3.4E+04				Acetone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	4.9E+00	3.4E+04				Benzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Bromodichloromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.7E+01	3.4E+04				Carbon disulfide
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Chlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.0E+00	3.4E+04				Chloroform
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Cyclohexane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Chlorodibromomethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	9.6E+01	3.4E+04				Ethanol (as methanol)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.5E+01	3.4E+04				Ethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Trichlorofluoromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,1,2-Trichloro-1,2,2-trifluoroethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.1E+00	3.4E+04				Dichlorotetrafluoroethane (f 114)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Dichlorodifluoromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Heptane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Hexane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				MTBE
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Methylene chloride
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				n-Propylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Styrene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.9E+01	3.4E+04				Tetrachloroethylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Tetrahydrofuran
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.8E+01	3.4E+04				Toluene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Trichloroethylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.6E+01	3.4E+04				p-Xylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.3E+01	3.4E+04				o-Xylene

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 229
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 229
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.6E-03	0.0E+00	0.0E+00	7.6E-03 229
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 229
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 229
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 229
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 229
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 229
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 229
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 229
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 229
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 229
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 229
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source URF, C _{building} (mg/m^3)	Unit risk factor, (mg/m ³) ⁻¹	Reference conc., (mg/m ³)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	bldg.	conc.,	conc.,	URF	RfC		
15	3.2E+01	0.10	8.3E+01	3.7E-03	4.0E+02	1.0E+245	4.2E-04	1.3E-02	1.3E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		NA	2.0E-01
15	2.1E+01	0.10	8.3E+01	3.7E-03	4.0E+02	4.3E+246	4.2E-04	8.6E-03	8.6E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	4.3E+59	1.1E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	3.5E+214	4.7E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		1.1E-05	8.0E-01
15	1.1E+02	0.10	8.3E+01	5.0E-03	4.0E+02	1.1E+182	5.3E-04	5.6E-02	5.6E-05	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	9.9E+173	5.5E-04	0.0E+00		NA	9.1E-03
15	1.9E+01	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+212	4.7E-04	9.0E-03	9.0E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	3.6E+01	0.10	8.3E+01	7.6E-03	4.0E+02	3.6E+118	7.3E-04	2.7E-02	2.7E-05	NA	3.2E+00
15	4.9E+00	0.10	8.3E+01	5.4E-03	4.0E+02	5.3E+168	5.6E-04	2.8E-03	2.8E-06	2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		3.7E-05	7.0E-02
15	2.7E+01	0.10	8.3E+01	6.3E-03	4.0E+02	6.0E+142	6.4E-04	1.7E-02	1.7E-05	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	2.4E+203	4.9E-04	0.0E+00		NA	1.0E+00
15	7.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	5.8E+142	6.4E-04	4.5E-03	4.5E-06	5.3E-06	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	1.1E+202	4.9E-04	0.0E+00		NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.5E-04	0.0E+00		2.7E-05	7.0E-02
15	9.6E+01	0.10	8.3E+01	1.0E-02	4.0E+02	2.9E+88	8.9E-04	8.6E-02	8.6E-05	NA	1.8E+00
15	1.5E+01	0.10	8.3E+01	4.6E-03	4.0E+02	9.5E+197	5.0E-04	7.3E-03	7.3E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.8E+170	5.6E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	0.0E+00		NA	3.0E+01
15	8.1E+00	0.10	8.3E+01	4.1E-03	4.0E+02	2.0E+223	4.5E-04	3.6E-03	3.6E-06	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	2.3E+160	5.9E-04	0.0E+00		NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-02	4.0E+02	1.8E+74	9.9E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	8.2E+144	6.3E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	9.8E+146	6.3E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.2E+247	4.2E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+209	4.8E-04	0.0E+00		NA	9.0E-01
15	2.9E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.7E+206	4.8E-04	1.4E-02	1.4E-05	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	5.4E+150	6.1E-04	0.0E+00		1.9E-06	3.0E-01
15	3.8E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.7E+170	5.6E-04	2.1E-02	2.1E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	9.1E+187	5.2E-04	0.0E+00		2.0E-06	6.0E-01
15	3.6E+01	0.10	8.3E+01	4.7E-03	4.0E+02	1.2E+193	5.1E-04	1.8E-02	1.8E-05	NA	7.0E-01
15	3.3E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.6E+170	5.6E-04	1.8E-02	1.8E-05	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		Property Boundary 8' bgs, PVP-3B	
				Chemical	
95636			0.008	1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678			0.005	1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933			0.110	2-Butanone	
591786			0.007	2-Hexanone	
67630				2-Propanol	
622968			0.005	4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641			0.036	Acetone	
71432			0.007	Benzene	
75274				Bromodichloromethane	
75150			0.130	Carbon disulfide	
108907				Chlorobenzene	
67663				Chloroform	
110827			0.006	Cyclohexane	
124481				Chlorodibromomethane	
64175			0.014	Ethanol (as methane)	
100441			0.006	Ethylbenzene	
75694			0.002	Trichlorofluoromethane	
76131				1,1,2-Trichloro-1,2,2-trifluoroethane	
76142			0.005	Dichlorotetrafluoroethane (F114)	
75718			0.073	Dichlorodifluoromethane	
142825			0.004	Heptane	
110543			0.002	Hexane	
1634044				MTBE	
75092				Methylene chloride	
103651				n-Propylbenzene	
100425			0.002	Styrene	
127184			0.006	Tetrachloroethylene	
109999			0.001	Tetrahydrofuran	
108883			0.014	Toluene	
79016				Trichloroethylene	
106423			0.012	p-Xylene	
95476			0.012	o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	244	19	244			s	OR

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
			0.130					
	1.71	0.366						

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	
70	30	30	350	

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation	
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	soil permeability,	seam perimeter,	gas conc.		
		θ_a^A	(cm ³ /cm ³)	θ_a^B	(cm ³ /cm ³)	θ_a^C	(cm ³ /cm ³)	S _{te}	(cm ³ /cm ³)	k _i	(cm ²)	k _{rg}	(cm ²)	k _v	X _{crack}	(cm)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	4.2E+01	3.4E+04	1,2,4-Trimethylbenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,2-Dichlorobenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.5E+01	3.4E+04	1,3,5-Trimethylbenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,3-Butadiene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,3-Dichlorobenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,4-Dichlorobenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.3E+02	3.4E+04	2-Butanone				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.1E+01	3.4E+04	2-Hexanone				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	2-Propanol				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.4E+01	3.4E+04	4-Ethyltoluene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	4-Methyl-2-pentanone				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.7E+01	3.4E+04	Acetone				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.3E+01	3.4E+04	Benzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Bromodichloromethane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	4.1E+02	3.4E+04	Carbon disulfide				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Chlorobenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Chloroform				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.0E+01	3.4E+04	Cyclohexane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Chlorodibromomethane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.7E+01	3.4E+04	Ethanol (as methanol)				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.5E+01	3.4E+04	Ethylbenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	9.2E+00	3.4E+04	Trichlorofluoromethane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	1,1,2-Trichloro-1,2,2-trifluoroethane (f 114)				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.5E+01	3.4E+04	Dichlorotetrafluoroethane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.7E+02	3.4E+04	Dichlorodifluoromethane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.8E+01	3.4E+04	Heptane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.9E+00	3.4E+04	Hexane				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	MTBE				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Methylene chloride				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	n-Propylbenzene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	9.6E+00	3.4E+04	Styrene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.9E+01	3.4E+04	Tetrachloroethylene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	3.9E+00	3.4E+04	Tetrahydrofuran				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	5.4E+01	3.4E+04	Toluene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04	Trichloroethylene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	5.3E+01	3.4E+04	p-Xylene				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	5.3E+01	3.4E+04	o-Xylene				

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 229
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 229
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.6E-03	0.0E+00	0.0E+00	7.6E-03 229
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 229
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 229
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 229
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 229
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 229
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 229
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 229
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 229
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 229
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 229
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Peclet number, A _{crack} (cm^2)	Exponent of equivalent foundation crack, exp(Pe ^l) (unitless)	Infinite indoor source attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
		Crack effective diffusion coefficient, D ^{crack} (cm^2/s)	Area of crack, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$)	(mg/m^3)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)		
15	4.2E+01	0.10	8.3E+01	3.7E-03	4.0E+02	1.0E+245	4.2E-04	1.7E-02	1.7E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		NA	2.0E-01
15	2.5E+01	0.10	8.3E+01	3.7E-03	4.0E+02	4.3E+246	4.2E-04	1.0E-02	1.0E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	4.3E+59	1.1E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	3.5E+214	4.7E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		1.1E-05	8.0E-01
15	3.3E+02	0.10	8.3E+01	5.0E-03	4.0E+02	1.1E+182	5.3E-04	1.8E-01	1.8E-04	NA	5.0E+00
15	3.1E+01	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	1.5E-02	1.5E-05	NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	9.9E+173	5.5E-04	0.0E+00		NA	9.1E-03
15	2.4E+01	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+212	4.7E-04	1.1E-02	1.1E-05	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	8.7E+01	0.10	8.3E+01	7.6E-03	4.0E+02	3.6E+118	7.3E-04	6.4E-02	6.4E-05	NA	3.2E+00
15	2.3E+01	0.10	8.3E+01	5.4E-03	4.0E+02	5.3E+168	5.6E-04	1.3E-02	1.3E-05	2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		3.7E-05	7.0E-02
15	4.1E+02	0.10	8.3E+01	6.3E-03	4.0E+02	6.0E+142	6.4E-04	2.6E-01	2.6E-04	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	2.4E+203	4.9E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	6.3E-03	4.0E+02	5.8E+142	6.4E-04	0.0E+00		5.3E-06	3.0E-01
15	2.0E+01	0.10	8.3E+01	4.5E-03	4.0E+02	1.1E+202	4.9E-04	9.8E-03	9.8E-06	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.5E-04	0.0E+00		2.7E-05	7.0E-02
15	2.7E+01	0.10	8.3E+01	1.0E-02	4.0E+02	2.9E+88	8.9E-04	2.4E-02	2.4E-05	NA	1.8E+00
15	2.5E+01	0.10	8.3E+01	4.6E-03	4.0E+02	9.5E+197	5.0E-04	1.2E-02	1.2E-05	NA	2.0E+00
15	9.2E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.8E+170	5.6E-04	5.1E-03	5.1E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	0.0E+00		NA	3.0E+01
15	3.5E+01	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	1.8E-02	1.8E-05	NA	3.0E+01
15	3.7E+02	0.10	8.3E+01	4.1E-03	4.0E+02	2.0E+223	4.5E-04	1.7E-01	1.7E-04	NA	2.0E-01
15	1.8E+01	0.10	8.3E+01	5.6E-03	4.0E+02	2.3E+160	5.9E-04	1.1E-02	1.1E-05	NA	7.0E+00
15	7.9E+00	0.10	8.3E+01	1.2E-02	4.0E+02	1.8E+74	9.9E-04	7.9E-03	7.9E-06	NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	8.2E+144	6.3E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	9.8E+146	6.3E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.2E+247	4.2E-04	0.0E+00		NA	1.4E-01
15	9.6E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+209	4.8E-04	4.6E-03	4.6E-06	NA	9.0E-01
15	3.9E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.7E+206	4.8E-04	1.9E-02	1.9E-05	5.9E-06	3.5E-02
15	3.9E+00	0.10	8.3E+01	6.0E-03	4.0E+02	5.4E+150	6.1E-04	2.4E-03	2.4E-06	1.9E-06	3.0E-01
15	5.4E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.7E+170	5.6E-04	3.0E-02	3.0E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	9.1E+187	5.2E-04	0.0E+00		2.0E-06	6.0E-01
15	5.3E+01	0.10	8.3E+01	4.7E-03	4.0E+02	1.2E+193	5.1E-04	2.7E-02	2.7E-05	NA	7.0E-01
15	5.3E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.6E+170	5.6E-04	3.0E-02	3.0E-05	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03	
ENTER	ENTER	ENTER			
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	Soil gas conc., C_g (ppmv)		
Property Boundary 8' bgs, PVP-4A					
Chemical					
95636			0.002	1,2,4-Trimethylbenzene	
95501				1,2-Dichlorobenzene	
108678			0.002	1,3,5-Trimethylbenzene	
106990				1,3-Butadiene	
541731				1,3-Dichlorobenzene	
106467				1,4-Dichlorobenzene	
78933			0.005	2-Butanone	
591786				2-Hexanone	
67630				2-Propanol	
622968			0.002	4-Ethyltoluene	
108101				4-Methyl-2-pentanone	
67641			0.011	Acetone	
71432				Benzene	
75274			0.002	Bromodichloromethane	
75150			0.002	Carbon disulfide	
108907				Chlorobenzene	
67663			0.003	Chloroform	
110827			0.007	Cyclohexane	
124481			0.002	Chlorodibromomethane	
64175			0.008	Ethanol (as methane)	
100441			0.002	Ethylbenzene	
75694				Trichlorofluoromethane	
76131				1,1,2-Trichloro-1,2,2-trifluoroethane	
76142				Dichlorotetrafluoroethane (F114)	
75718			0.014	Dichlorodifluoromethane	
142825			0.004	Heptane	
110543				Hexane	
1634044				MTBE	
75092			0.002	Methylene chloride	
103651				n-Propylbenzene	
100425			0.002	Styrene	
127184			0.003	Tetrachloroethylene	
109999				Tetrahydrofuran	
108883			0.005	Toluene	
79016				Trichloroethylene	
106423			0.003	p-Xylene	
95476			0.002	o-Xylene	

ENTER	ENTER	ENTER				ENTER	ENTER
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth, L_s (cm)	Average soil temperature, T_s (°C)	ENTER	ENTER	ENTER	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)
15	244	19	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	OR	
						s	

8' bgs								
ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	
Lookup Soil Parameters			Lookup Soil Parameters				Lookup Soil Parameters	
1.71	0.366	0.130						

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)		
70	30	30	350		

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. ventilation
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	seam perimeter,	gas conc.		
		θ_a^A	θ_a^B	θ_a^C	S_{te}	k_i	k_g	k_v	X_{crack}	$(\mu\text{g}/\text{m}^3)$	$Q_{building}$ (cm^3/s)				
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.0E+00	3.4E+04				1,2,4-Trimethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,2-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	9.0E+00	3.4E+04				1,3,5-Trimethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3-Butadiene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,3-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,4-Dichlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.6E+01	3.4E+04				2-Butanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				2-Hexanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				2-Propanol
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	6.6E+00	3.4E+04				4-Ethyltoluene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				4-Methyl-2-pentanone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.7E+01	3.4E+04				Acetone
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Benzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.6E+01	3.4E+04				Bromodichloromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	5.7E+00	3.4E+04				Carbon disulfide
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Chlorobenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.4E+01	3.4E+04				Chloroform
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.4E+01	3.4E+04				Cyclohexane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.4E+01	3.4E+04				Chlorodibromomethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.6E+01	3.4E+04				Ethanol (as methanol)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.4E+00	3.4E+04				Ethylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Trichlorofluoromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				1,1,2-Trichloro-1,2,2-trifluoroethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Dichlorotetrafluoroethane (f 114)
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.1E+01	3.4E+04				Dichlorodifluoromethane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.7E+01	3.4E+04				Heptane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Hexane
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	5.3E+00	3.4E+04				MTBE
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Methylene chloride
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				n-Propylbenzene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	7.0E+00	3.4E+04				Styrene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	2.4E+01	3.4E+04				Tetrachloroethylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Tetrahydrofuran
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.9E+01	3.4E+04				Toluene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	0.0E+00	3.4E+04				Trichloroethylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	1.2E+01	3.4E+04				p-Xylene
9.5E+08	229	0.236	ERROR	ERROR	0.246	1.0E-07	0.718	7.2E-08	4,000	8.9E+00	3.4E+04				o-Xylene

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ⁻³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.5E-02	0.0E+00	0.0E+00	1.5E-02 229
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 229
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 229
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.6E-03	0.0E+00	0.0E+00	7.6E-03 229
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.4E-03	0.0E+00	0.0E+00	5.4E-03 229
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.8E-03	0.0E+00	0.0E+00	1.8E-03 229
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	6.3E-03	0.0E+00	0.0E+00	6.3E-03 229
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 229
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.2E-03	0.0E+00	0.0E+00	1.2E-03 229
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	1.0E-02	0.0E+00	0.0E+00	1.0E-02 229
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 229
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 229
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 229
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.2E-02	0.0E+00	0.0E+00	1.2E-02 229
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	6.2E-03	0.0E+00	0.0E+00	6.2E-03 229
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.7E-03	0.0E+00	0.0E+00	3.7E-03 229
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 229
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 229
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	6.0E-03	0.0E+00	0.0E+00	6.0E-03 229
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.8E-03	0.0E+00	0.0E+00	4.8E-03 229
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.7E-03	0.0E+00	0.0E+00	4.7E-03 229
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	5.3E-03	0.0E+00	0.0E+00	5.3E-03 229

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Peclet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)			
15	8.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.0E+245	4.2E-04	3.4E-03	3.4E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		NA	2.0E-01
15	9.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	4.3E+246	4.2E-04	3.8E-03	3.8E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.5E-02	4.0E+02	4.3E+59	1.1E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	3.5E+214	4.7E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	1.4E+215	4.7E-04	0.0E+00		1.1E-05	8.0E-01
15	1.6E+01	0.10	8.3E+01	5.0E-03	4.0E+02	1.1E+182	5.3E-04	8.6E-03	8.6E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	9.9E+173	5.5E-04	0.0E+00		NA	9.1E-03
15	6.6E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+212	4.7E-04	3.1E-03	3.1E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.6E-03	4.0E+02	2.0E+197	5.0E-04	0.0E+00		NA	3.0E+00
15	2.7E+01	0.10	8.3E+01	7.6E-03	4.0E+02	3.6E+118	7.3E-04	2.0E-02	2.0E-05	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.4E-03	4.0E+02	5.3E+168	5.6E-04	0.0E+00		2.9E-05	6.0E-02
15	1.6E+01	0.10	8.3E+01	1.8E-03	4.0E+02	#NUM!	2.3E-04	3.5E-03	3.5E-06	3.7E-05	7.0E-02
15	5.7E+00	0.10	8.3E+01	6.3E-03	4.0E+02	6.0E+142	6.4E-04	3.7E-03	3.7E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	2.4E+203	4.9E-04	0.0E+00		NA	1.0E+00
15	1.4E+01	0.10	8.3E+01	6.3E-03	4.0E+02	5.8E+142	6.4E-04	9.2E-03	9.2E-06	5.3E-06	3.0E-01
15	2.4E+01	0.10	8.3E+01	4.5E-03	4.0E+02	1.1E+202	4.9E-04	1.2E-02	1.2E-05	NA	6.0E+00
15	1.4E+01	0.10	8.3E+01	1.2E-03	4.0E+02	#NUM!	1.5E-04	2.1E-03	2.1E-06	2.7E-05	7.0E-02
15	1.6E+01	0.10	8.3E+01	1.0E-02	4.0E+02	2.9E+88	8.9E-04	1.4E-02	1.4E-05	NA	1.8E+00
15	8.4E+00	0.10	8.3E+01	4.6E-03	4.0E+02	9.5E+197	5.0E-04	4.2E-03	4.2E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.8E+170	5.6E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	2.4E+190	5.1E-04	0.0E+00		NA	3.0E+01
15	7.1E+01	0.10	8.3E+01	4.1E-03	4.0E+02	2.0E+223	4.5E-04	3.2E-02	3.2E-05	NA	2.0E-01
15	1.7E+01	0.10	8.3E+01	5.6E-03	4.0E+02	2.3E+160	5.9E-04	9.8E-03	9.8E-06	NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.2E-02	4.0E+02	1.8E+74	9.9E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	6.2E-03	4.0E+02	8.2E+144	6.3E-04	0.0E+00		2.6E-07	8.0E+00
15	5.3E+00	0.10	8.3E+01	6.2E-03	4.0E+02	9.8E+146	6.3E-04	3.3E-03	3.3E-06	1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.7E-03	4.0E+02	1.2E+247	4.2E-04	0.0E+00		NA	1.4E-01
15	7.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	1.3E+209	4.8E-04	3.3E-03	3.3E-06	NA	9.0E-01
15	2.4E+01	0.10	8.3E+01	4.4E-03	4.0E+02	1.7E+206	4.8E-04	1.1E-02	1.1E-05	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	6.0E-03	4.0E+02	5.4E+150	6.1E-04	0.0E+00		1.9E-06	3.0E-01
15	1.9E+01	0.10	8.3E+01	5.3E-03	4.0E+02	4.7E+170	5.6E-04	1.1E-02	1.1E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.8E-03	4.0E+02	9.1E+187	5.2E-04	0.0E+00		2.0E-06	6.0E-01
15	1.2E+01	0.10	8.3E+01	4.7E-03	4.0E+02	1.2E+193	5.1E-04	5.8E-03	5.8E-06	NA	7.0E-01
15	8.9E+00	0.10	8.3E+01	5.3E-03	4.0E+02	4.6E+170	5.6E-04	5.0E-03	5.0E-06	NA	7.0E-01

Soil Gas Concentration Data				SG-ADV Version 2.0; 02/03																																						
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)		Background 5' bgs, PVP-5																																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1,2,4-Trimethylbenzene</td></tr> <tr><td>1,2-Dichlorobenzene</td></tr> <tr><td>1,3,5-Trimethylbenzene</td></tr> <tr><td>1,3-Butadiene</td></tr> <tr><td>1,3-Dichlorobenzene</td></tr> <tr><td>1,4-Dichlorobenzene</td></tr> <tr><td>2-Butanone</td></tr> <tr><td>2-Hexanone</td></tr> <tr><td>2-Propanol</td></tr> <tr><td>4-Ethyltoluene</td></tr> <tr><td>4-Methyl-2-pentanone</td></tr> <tr><td>Acetone</td></tr> <tr><td>Benzene</td></tr> <tr><td>Bromodichloromethane</td></tr> <tr><td>Carbon disulfide</td></tr> <tr><td>Chlorobenzene</td></tr> <tr><td>Chloroform</td></tr> <tr><td>Cyclohexane</td></tr> <tr><td>Chlorodibromomethane</td></tr> <tr><td>Ethanol (as methane)</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Trichlorofluoromethane</td></tr> <tr><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td></tr> <tr><td>Dichlortetrafluoroethane (F114)</td></tr> <tr><td>Dichlorodifluoromethane</td></tr> <tr><td>Heptane</td></tr> <tr><td>Hexane</td></tr> <tr><td>MTBE</td></tr> <tr><td>Methylene chloride</td></tr> <tr><td>n-Propylbenzene</td></tr> <tr><td>Styrene</td></tr> <tr><td>Tetrachloroethylene</td></tr> <tr><td>Tetrahydrofuran</td></tr> <tr><td>Toluene</td></tr> <tr><td>Trichloroethylene</td></tr> <tr><td>p-Xylene</td></tr> <tr><td>o-Xylene</td></tr> </table>		1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	2-Propanol	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Carbon disulfide	Chlorobenzene	Chloroform	Cyclohexane	Chlorodibromomethane	Ethanol (as methane)	Ethylbenzene	Trichlorofluoromethane	1,1,2-Trichloro-1,2,2-trifluoroethane	Dichlortetrafluoroethane (F114)	Dichlorodifluoromethane	Heptane	Hexane	MTBE	Methylene chloride	n-Propylbenzene	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	Trichloroethylene	p-Xylene	o-Xylene
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p-Xylene																																										
o-Xylene																																										
95636			0.004																																							
95501																																										
108678			0.003																																							
106990																																										
541731																																										
106467																																										
78933			0.007																																							
591786																																										
67630																																										
622968			0.002																																							
108101																																										
67641			0.017																																							
71432																																										
75274																																										
75150			0.002																																							
108907																																										
67663																																										
110827			0.005																																							
124481																																										
64175			0.026																																							
100441																																										
75694																																										
76131																																										
76142																																										
75718																																										
142825			0.003																																							
110543																																										
1634044																																										
75092																																										
103651																																										
100425																																										
127184			0.001																																							
109999			0.001																																							
108883			0.005																																							
79016																																										
106423			0.004																																							
95476			0.002																																							

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
			0.136					
	1.70	0.367						

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER	ENTER	ENTER	ENTER
70	30	30		350	

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth below grade, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^t) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
		Crack effective diffusion coefficient, A _{crack} (cm^2)	(unitless)	(unitless)	($\mu\text{g}/\text{m}^3$) ⁻¹	(mg/m^3)	(mg/m^3)	(mg/m^3)			
15	1.9E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	1.1E-02	1.1E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	1.6E+01	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	9.1E-03	9.1E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	2.1E+01	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	1.5E-02	1.5E-05	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	9.3E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	6.1E-03	6.1E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	4.1E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	4.0E-02	4.0E-05	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05	6.0E-02
15	0.0E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	0.0E+00		3.7E-05	7.0E-02
15	5.7E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	4.9E-03	4.9E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	0.0E+00		5.3E-06	3.0E-01
15	1.8E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	1.2E-02	1.2E-05	NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	5.0E+01	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	5.8E-02	5.8E-05	NA	1.8E+00
15	0.0E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	0.0E+00		NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01
15	1.0E+01	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	8.4E-03	8.4E-06	NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	8.3E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	5.6E-03	5.6E-06	5.9E-06	3.5E-02
15	3.3E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	2.8E-03	2.8E-06	1.9E-06	3.0E-01
15	1.7E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.3E-02	1.3E-05	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01
15	1.6E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	1.1E-02	1.1E-05	NA	7.0E-01
15	9.3E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	7.1E-03	7.1E-06	NA	7.0E-01

SG-ADV
Version 2.0; 02/03

Soil Gas Concentration Data		
ENTER	ENTER	ENTER
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	Soil gas conc., C_g (ppmv)
OR		
95636		0.005
95501		
108678		0.002
106990		
541731		
106467		
78933		0.003
591786		
67630		
622968		0.002
108101		
67641		0.009
71432		
75274		0.001
75150		0.002
108907		
67663		
110827		
124481		
64175		0.031
100414		0.002
75694		
76131		
76142		
75718		
142825		
110543		
1634044		
75092		
103651		
100425		
127184		0.001
109999		
108883		0.003
79016		
106423		0.004
95476		0.001

Background 5' bgs, PVP-6

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Depth below grade to bottom of enclosed space floor, L_F (cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s (°C)	Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, h_B (Enter value or 0) (cm)	Thickness of soil stratum C, h_C (Enter value or 0) (cm)	Soil stratum A SCS soil type (used to estimate soil vapor permeability)	User-defined stratum A soil vapor permeability, k_v (cm^2)	
15	152.5	19	152.5			s		

5' bgs			Totals must add up to value of L_s (cell F24)			User-defined stratum A soil vapor permeability, k_v (cm^2)		
Stratum A SCS soil type	Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	Stratum A soil total porosity, n^A (unitless)	Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	Stratum B SCS soil type	Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	Stratum B soil total porosity, n^B (unitless)	Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	Stratum C SCS soil type
Lookup Soil Parameters				Lookup Soil Parameters				Lookup Soil Parameters

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Enclosed space floor thickness, L_{crack} (cm)	Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	Enclosed space floor length, L_B (cm)	Enclosed space width, W_B (cm)	Enclosed space height, H_B (cm)	Floor-wall seam crack width, w (cm)	Indoor air exchange rate, ER (1/h)	Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	
10	40	1000	1000	244	0.1	0.5		5

ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_c (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)
70	30	30	350

Exposure duration, τ	Source-building separation, L _T (sec)	Stratum A		Stratum B		Stratum C		Stratum A		Stratum A		Stratum A		Floor-wall	Bldg. Soil gas rate, Q _{building} (cm ³ /s)
		soil porosity,	air-filled	soil porosity,	air-filled	soil porosity,	air-filled	total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	permeability, X _{crack}	seam conc.		
		θ_a^A	(cm ³ /cm ³)	θ_a^B	(cm ³ /cm ³)	θ_a^C	(cm ³ /cm ³)	S _{te}	(cm ²)	(cm ²)	(cm ²)	(cm)	($\mu\text{g}/\text{m}^3$)		
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.3E+01	3.4E+04				1,2,4-Trimethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,2-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.0E+00	3.4E+04				1,3,5-Trimethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,3-Butadiene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,3-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,4-Dichlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.0E+01	3.4E+04				2-Butanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				2-Hexanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				2-Propanol
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.1E+00	3.4E+04				4-Ethyltoluene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				4-Methyl-2-pentanone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+01	3.4E+04				Acetone
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Benzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	9.6E+00	3.4E+04				Bromodichloromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.8E+00	3.4E+04				Carbon disulfide
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Chlorobenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Chloroform
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Cyclohexane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Chlorodibromomethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.0E+01	3.4E+04				Ethanol (as methanol)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.6E+00	3.4E+04				Ethylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Trichlorofluoromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				1,1,2-Trichloro-1,2,2-trifluoroethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Dichlorotetrafluoroethane (f 114)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Dichlorodifluoromethane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Heptane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Hexane
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				MTBE
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Methylene chloride
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				n-Propylbenzene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Styrene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.3E+00	3.4E+04				Tetrachloroethylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Tetrahydrofuran
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.1E+01	3.4E+04				Toluene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04				Trichloroethylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.6E+01	3.4E+04				p-Xylene
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.2E+00	3.4E+04				o-Xylene

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total area ratio, 1	Crack depth below grade, Z _{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, ΔH _{v,TS} (cal/mol)	Henry's law constant at ave. soil temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	vapor flow rate into bldg., Q _{soil} (cm^3/s)	Crack effective diffusion coefficient, D ^{crack} (cm^2/s)	Area of crack, A _{crack} (cm^2)	Exponent of equivalent foundation Pelet number, exp(Pe ^l) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)
15	2.3E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	1.4E-02	1.4E-05	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	0.0E+00		NA	2.0E-01
15	8.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	4.7E-03	4.7E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	0.0E+00		NA	1.1E-01
15	0.0E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	0.0E+00		1.1E-05	8.0E-01
15	1.0E+01	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	7.5E-03	7.5E-06	NA	5.0E+00
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	0.0E+00		NA	9.1E-03
15	7.1E+00	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	4.7E-03	4.7E-06	NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	0.0E+00		NA	3.0E+00
15	2.2E+01	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	2.2E-02	2.2E-05	NA	3.2E+00
15	0.0E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	0.0E+00		2.9E-05	6.0E-02
15	9.6E+00	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	3.2E-03	3.2E-06	3.7E-05	7.0E-02
15	4.8E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	4.1E-03	4.1E-06	NA	8.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	0.0E+00		NA	1.0E+00
15	0.0E+00	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	0.0E+00		5.3E-06	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	0.0E+00		NA	6.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	0.0E+00		2.7E-05	7.0E-02
15	6.0E+01	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	6.9E-02	6.9E-05	NA	1.8E+00
15	6.6E+00	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	4.6E-03	4.6E-06	NA	2.0E+00
15	0.0E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	0.0E+00		NA	7.0E-01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	0.0E+00		NA	3.0E+01
15	0.0E+00	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	0.0E+00		NA	7.0E+00
15	0.0E+00	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	0.0E+00		NA	2.0E-01
15	0.0E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	0.0E+00		2.6E-07	8.0E+00
15	0.0E+00	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	0.0E+00		1.0E-06	4.0E-01
15	0.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	0.0E+00		NA	1.4E-01
15	0.0E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	0.0E+00		NA	9.0E-01
15	8.3E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	5.6E-03	5.6E-06	5.9E-06	3.5E-02
15	0.0E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	0.0E+00		1.9E-06	3.0E-01
15	1.1E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	8.6E-03	8.6E-06	NA	3.0E-01
15	0.0E+00	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	0.0E+00		2.0E-06	6.0E-01
15	1.6E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	1.1E-02	1.1E-05	NA	7.0E-01
15	6.2E+00	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	4.8E-03	4.8E-06	NA	7.0E-01

SG-ADV
Version 2.0; 02/03

Soil Gas Concentration Data			Site-Wide 5' bgs	
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	ENTER OR Soil gas conc., C_g (ppmv)	Chemical	
95636		0.009	1,2,4-Trimethylbenzene	
95501		0.004	1,2-Dichlorobenzene	
108678		0.003	1,3,5-Trimethylbenzene	
106990			1,3-Butadiene	
541731		0.0008	1,3-Dichlorobenzene	
106467		0.001	1,4-Dichlorobenzene	
78933		0.054	2-Butanone	
591786		0.003	2-Hexanone	
67630		0.006	2-Propanol	
622968		0.009	4-Ethyltoluene	
108101		0.001	4-Methyl-2-pentanone	
67641		0.058	Acetone	
71432		0.003	Benzene	
75274		0.002	Bromodichloromethane	
75150		0.020	Carbon disulfide	
108907		0.001	Chlorobenzene	
67663		0.022	Chloroform	
110827		0.010	Cyclohexane	
124481		0.001	Chlorodibromomethane	
64175		0.012	Ethanol (as methane)	
100441		0.023	Ethylbenzene	
75694		0.001	Trichlorofluoromethane	
76131		0.092	1,1,2-Trichloro-1,2,2-trifluoroethane	
76142		0.004	Dichlorotetrafluoroethane (F114)	
75718		0.052	Dichlorodifluoromethane	
142825		0.002	Heptane	
110543		0.003	Hexane	
1634044		0.001	MTBE	
75092		0.004	Methylene chloride	
103651		0.001	n-Propylbenzene	
100425		0.001	Styrene	
127184		0.044	Tetrachloroethylene	
109999		0.001	Tetrahydrofuran	
108883		0.329	Toluene	
79016		0.004	Trichloroethylene	
106423		0.016	p-Xylene	
95476		0.030	o-Xylene	

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth, L_s (cm)	ENTER Average soil temperature, T_s (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (Enter value or 0) (cm)	ENTER Thickness of soil stratum C, h_C (Enter value or 0) (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	152.5	19	152.5			s	OR

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters
		1.70	0.367	0.136				

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.5	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	30	30	350

		Stratum A	Stratum B	Stratum C	Stratum A	Stratum A	Stratum A	Floor-			
Exposure duration,	Source-building separation,	soil porosity,	soil porosity,	soil porosity,	effective total fluid saturation,	intrinsic permeability,	relative air permeability,	effective vapor permeability,	wall seam perimeter,	Bldg.	
τ (sec)	L_T (cm)	θ_a^A (cm^3/cm^3)	θ_a^B (cm^3/cm^3)	θ_a^C (cm^3/cm^3)	S_{te} (cm^3/cm^3)	k_i (cm^2)	k_g (cm^2)	k_v (cm^2)	X_{crack} (cm)	gas conc. ($\mu\text{g}/\text{m}^3$)	Q_{building} (cm^3/s)
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.5E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.5E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.5E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	0.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.7E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	5.5E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.6E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.3E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.5E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.8E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.3E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	9.8E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.2E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.4E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.5E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.1E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.5E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	6.7E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.3E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.0E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	5.3E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.2E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.0E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.6E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	8.4E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.1E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.8E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.4E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	4.0E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.8E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	3.0E+02	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.3E+00	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.3E+03	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	2.2E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	7.1E+01	3.4E+04
9.5E+08	137.5	0.231	ERROR	ERROR	0.264	1.0E-07	0.694	7.0E-08	4,000	1.3E+02	3.4E+04

Area of enclosed space below grade, A _B (cm ²)	Crack-to-total ratio, 1	Crack depth, Z _{crack} (cm)	Enthalpy of vaporization at grade, ΔH _{v,TS} (cal/mol)	Henry's law constant at temperature, H _{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H' _{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ _{TS} (g/cm-s)	Stratum			Total overall path length, L _d (cm)
							A	B	C	
1.1E+06	3.8E-04	15	11,579	4.1E-03	1.7E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	11,596	1.3E-03	5.3E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,561	3.9E-03	1.6E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	5,071	6.2E-02	2.6E+00	1.8E-04	1.4E-02	0.0E+00	0.0E+00	1.4E-02 137.5
1.1E+06	3.8E-04	15	11,081	2.1E-03	8.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	11,150	1.6E-03	6.8E-02	1.8E-04	3.9E-03	0.0E+00	0.0E+00	3.9E-03 137.5
1.1E+06	3.8E-04	15	8,307	4.2E-05	1.7E-03	1.8E-04	4.6E-03	0.0E+00	0.0E+00	4.6E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	12,390	5.7E-06	2.4E-04	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	10,150	5.2E-03	2.1E-01	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,741	9.8E-05	4.1E-03	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	7,447	3.0E-05	1.2E-03	1.8E-04	7.1E-03	0.0E+00	0.0E+00	7.1E-03 137.5
1.1E+06	3.8E-04	15	8,030	4.2E-03	1.7E-01	1.8E-04	5.0E-03	0.0E+00	0.0E+00	5.0E-03 137.5
1.1E+06	3.8E-04	15	8,576	1.2E-03	4.9E-02	1.8E-04	1.7E-03	0.0E+00	0.0E+00	1.7E-03 137.5
1.1E+06	3.8E-04	15	6,612	2.4E-02	1.0E+00	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	9,712	2.6E-03	1.1E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	7,461	2.8E-03	1.2E-01	1.8E-04	5.9E-03	0.0E+00	0.0E+00	5.9E-03 137.5
1.1E+06	3.8E-04	15	8,137	7.8E-02	3.2E+00	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	6,726	6.2E-04	2.6E-02	1.8E-04	1.1E-03	0.0E+00	0.0E+00	1.1E-03 137.5
1.1E+06	3.8E-04	15	11,703	3.0E-06	1.3E-04	1.8E-04	9.7E-03	0.0E+00	0.0E+00	9.7E-03 137.5
1.1E+06	3.8E-04	15	10,052	5.5E-03	2.3E-01	1.8E-04	4.2E-03	0.0E+00	0.0E+00	4.2E-03 137.5
1.1E+06	3.8E-04	15	6,053	7.8E-02	3.3E+00	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	6,853	3.8E-01	1.6E+01	1.8E-04	4.4E-03	0.0E+00	0.0E+00	4.4E-03 137.5
1.1E+06	3.8E-04	15	8,118	2.6E-01	1.1E+01	1.8E-04	3.8E-03	0.0E+00	0.0E+00	3.8E-03 137.5
1.1E+06	3.8E-04	15	8,324	1.2E+00	5.2E+01	1.8E-04	5.2E-03	0.0E+00	0.0E+00	5.2E-03 137.5
1.1E+06	3.8E-04	15	7,617	1.3E+00	5.3E+01	1.8E-04	1.1E-02	0.0E+00	0.0E+00	1.1E-02 137.5
1.1E+06	3.8E-04	15	7,179	4.9E-04	2.0E-02	1.8E-04	5.8E-03	0.0E+00	0.0E+00	5.8E-03 137.5
1.1E+06	3.8E-04	15	6,938	1.7E-03	7.2E-02	1.8E-04	5.7E-03	0.0E+00	0.0E+00	5.7E-03 137.5
1.1E+06	3.8E-04	15	11,251	7.2E-03	3.0E-01	1.8E-04	3.4E-03	0.0E+00	0.0E+00	3.4E-03 137.5
1.1E+06	3.8E-04	15	10,350	1.9E-03	8.0E-02	1.8E-04	4.0E-03	0.0E+00	0.0E+00	4.0E-03 137.5
1.1E+06	3.8E-04	15	9,462	1.3E-02	5.5E-01	1.8E-04	4.1E-03	0.0E+00	0.0E+00	4.1E-03 137.5
1.1E+06	3.8E-04	15	0	7.0E-05	2.9E-03	1.8E-04	5.6E-03	0.0E+00	0.0E+00	5.6E-03 137.5
1.1E+06	3.8E-04	15	9,056	4.8E-03	2.0E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5
1.1E+06	3.8E-04	15	8,445	7.7E-03	3.2E-01	1.8E-04	4.5E-03	0.0E+00	0.0E+00	4.5E-03 137.5
1.1E+06	3.8E-04	15	10,143	5.4E-03	2.2E-01	1.8E-04	4.3E-03	0.0E+00	0.0E+00	4.3E-03 137.5
1.1E+06	3.8E-04	15	10,302	3.6E-03	1.5E-01	1.8E-04	4.9E-03	0.0E+00	0.0E+00	4.9E-03 137.5

Convection path length, L _p (cm)	Source conc., C _{source} ($\mu\text{g}/\text{m}^3$)	Average vapor radius, r _{crack} (cm)	Crack flow rate into bldg., Q _{soil} (cm^3/s)	Area of crack, D ^{crack} (cm^2/s)	Exponent of equivalent foundation Pelet number, exp(Pe ^f) (unitless)	Infinite indoor attenuation coefficient, α	Infinite source conc., C _{building} ($\mu\text{g}/\text{m}^3$)	Infinite source bldg. conc., C _{building} (mg/m^3)	Unit risk factor, URF	Reference conc., RfC ($\mu\text{g}/\text{m}^3$)	
15	4.5E+01	0.10	8.3E+01	3.4E-03	4.0E+02	3.6E+264	5.9E-04	2.7E-02	2.7E-05	NA	6.0E-03
15	2.5E+01	0.10	8.3E+01	3.9E-03	4.0E+02	2.0E+232	6.5E-04	1.6E-02	1.6E-05	NA	2.0E-01
15	1.5E+01	0.10	8.3E+01	3.4E-03	4.0E+02	2.0E+266	5.9E-04	8.8E-03	8.8E-06	NA	6.0E-03
15	0.0E+00	0.10	8.3E+01	1.4E-02	4.0E+02	2.5E+64	1.4E-03	0.0E+00		2.8E-04	NA
15	4.7E+00	0.10	8.3E+01	3.9E-03	4.0E+02	4.5E+231	6.5E-04	3.1E-03	3.1E-06	NA	1.1E-01
15	5.5E+00	0.10	8.3E+01	3.9E-03	4.0E+02	2.1E+232	6.5E-04	3.6E-03	3.6E-06	1.1E-05	8.0E-01
15	1.6E+02	0.10	8.3E+01	4.6E-03	4.0E+02	1.3E+196	7.4E-04	1.2E-01	1.2E-04	NA	5.0E+00
15	1.3E+01	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	8.7E-03	8.7E-06	NA	3.0E+00
15	1.5E+01	0.10	8.3E+01	4.9E-03	4.0E+02	1.0E+185	7.7E-04	1.2E-02	1.2E-05	NA	9.1E-03
15	3.8E+01	0.10	8.3E+01	4.0E-03	4.0E+02	1.1E+229	6.6E-04	2.5E-02	2.5E-05	NA	7.0E-01
15	3.3E+00	0.10	8.3E+01	4.3E-03	4.0E+02	7.3E+212	6.9E-04	2.3E-03	2.3E-06	NA	3.0E+00
15	1.4E+02	0.10	8.3E+01	7.1E-03	4.0E+02	5.0E+127	9.7E-04	1.4E-01	1.4E-04	NA	3.2E+00
15	9.8E+00	0.10	8.3E+01	5.0E-03	4.0E+02	1.5E+182	7.7E-04	7.6E-03	7.6E-06	2.9E-05	6.0E-02
15	1.2E+01	0.10	8.3E+01	1.7E-03	4.0E+02	#NUM!	3.3E-04	4.0E-03	4.0E-06	3.7E-05	7.0E-02
15	6.4E+01	0.10	8.3E+01	5.9E-03	4.0E+02	1.5E+154	8.7E-04	5.5E-02	5.5E-05	NA	8.0E-01
15	3.5E+00	0.10	8.3E+01	4.1E-03	4.0E+02	4.0E+219	6.8E-04	2.4E-03	2.4E-06	NA	1.0E+00
15	1.1E+02	0.10	8.3E+01	5.9E-03	4.0E+02	1.4E+154	8.7E-04	9.4E-02	9.4E-05	5.3E-06	3.0E-01
15	3.5E+01	0.10	8.3E+01	4.1E-03	4.0E+02	1.4E+218	6.8E-04	2.4E-02	2.4E-05	NA	6.0E+00
15	6.7E+00	0.10	8.3E+01	1.1E-03	4.0E+02	#NUM!	2.3E-04	1.5E-03	1.5E-06	2.7E-05	7.0E-02
15	2.3E+01	0.10	8.3E+01	9.7E-03	4.0E+02	1.2E+93	1.2E-03	2.6E-02	2.6E-05	NA	1.8E+00
15	1.0E+02	0.10	8.3E+01	4.2E-03	4.0E+02	5.9E+213	6.9E-04	7.0E-02	7.0E-05	NA	2.0E+00
15	5.3E+00	0.10	8.3E+01	4.9E-03	4.0E+02	2.0E+184	7.7E-04	4.1E-03	4.1E-06	NA	7.0E-01
15	7.2E+02	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	5.1E-01	5.1E-04	NA	3.0E+01
15	3.0E+01	0.10	8.3E+01	4.4E-03	4.0E+02	3.7E+205	7.1E-04	2.1E-02	2.1E-05	NA	3.0E+01
15	2.6E+02	0.10	8.3E+01	3.8E-03	4.0E+02	1.3E+241	6.3E-04	1.7E-01	1.7E-04	NA	2.0E-01
15	8.4E+00	0.10	8.3E+01	5.2E-03	4.0E+02	1.4E+173	8.0E-04	6.7E-03	6.7E-06	NA	7.0E+00
15	1.1E+01	0.10	8.3E+01	1.1E-02	4.0E+02	1.5E+80	1.3E-03	1.4E-02	1.4E-05	NA	2.0E-01
15	2.8E+00	0.10	8.3E+01	5.8E-03	4.0E+02	2.8E+156	8.6E-04	2.4E-03	2.4E-06	2.6E-07	8.0E+00
15	1.4E+01	0.10	8.3E+01	5.7E-03	4.0E+02	5.1E+158	8.5E-04	1.2E-02	1.2E-05	1.0E-06	4.0E-01
15	4.0E+00	0.10	8.3E+01	3.4E-03	4.0E+02	5.9E+266	5.9E-04	2.4E-03	2.4E-06	NA	1.4E-01
15	3.8E+00	0.10	8.3E+01	4.0E-03	4.0E+02	6.0E+225	6.7E-04	2.5E-03	2.5E-06	NA	9.0E-01
15	3.0E+02	0.10	8.3E+01	4.1E-03	4.0E+02	4.9E+222	6.7E-04	2.0E-01	2.0E-04	5.9E-06	3.5E-02
15	2.3E+00	0.10	8.3E+01	5.6E-03	4.0E+02	3.5E+162	8.4E-04	2.0E-03	2.0E-06	1.9E-06	3.0E-01
15	1.3E+03	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	9.7E-01	9.7E-04	NA	3.0E-01
15	2.2E+01	0.10	8.3E+01	4.5E-03	4.0E+02	9.0E+202	7.2E-04	1.6E-02	1.6E-05	2.0E-06	6.0E-01
15	7.1E+01	0.10	8.3E+01	4.3E-03	4.0E+02	3.1E+208	7.0E-04	5.0E-02	5.0E-05	NA	7.0E-01
15	1.3E+02	0.10	8.3E+01	4.9E-03	4.0E+02	1.9E+184	7.7E-04	1.0E-01	1.0E-04	NA	7.0E-01

SummaryStats

Variable name	NumObs	Minimum	Maximum	Mean	Median	Std Dev	CV	Skewness	Variance
1,2,4-Trimethylbenzene	36	0.55	15	3.02	1.6	3.61	1.20	1.87	13.06
1,2-Dichlorobenzene	36	0.55	26	1.37	0.6	4.24	3.08	5.94	17.95
1,3,5-Trimethylbenzene	36	0.55	12	1.77	0.6	2.32	1.31	2.92	5.39
1,3-Dichlorobenzene	36	0.55	2.45	0.67	0.6	0.35	0.52	4.53	0.12
1,4-Dichlorobenzene	36	0.55	3.9	0.73	0.6	0.63	0.86	4.53	0.39
2-Butanone	36	0.55	110	11.66	2.5	25.43	2.18	3.14	646.78
2-Hexanone	36	2.2	10	2.81	2.4	1.57	0.56	3.78	2.46
2-Propanol	36	2.2	21	3.56	2.4	3.79	1.06	3.60	14.34
4-Ethyltoluene	36	0.55	20	2.43	0.65	3.77	1.55	3.41	14.23
4-Methyl-2-pentanone	36	0.55	2.45	0.68	0.6	0.38	0.55	4.20	0.14
Acetone	36	2.2	130	15.62	7.85	25.66	1.64	3.36	658.65
Benzene	36	0.55	7	1.96	0.925	1.91	0.98	1.40	3.67
Bromodichloromethane	36	0.55	5.6	0.99	0.6	1.10	1.12	3.01	1.21
Carbon Disulfide	36	0.55	130	11.00	3.1	22.25	2.02	4.66	494.94
Chlorobenzene	36	0.55	2.45	0.66	0.6	0.33	0.50	5.18	0.11
Chloroform	36	0.55	44	5.70	2.375	9.68	1.70	2.72	93.74
Cyclohexane	36	0.55	24	2.70	0.625	4.37	1.62	3.65	19.10
Dibromochloromethane	36	0.55	2.45	0.67	0.6	0.35	0.52	4.52	0.12
Ethanol	36	2.2	50	5.80	2.4	8.32	1.44	4.53	69.28
Ethyl Benzene	36	0.55	67	4.28	0.875	11.38	2.66	5.12	129.52
Freon 11	36	0.55	2.7	0.78	0.6	0.52	0.67	2.82	0.27
Freon 113	36	0.55	290	11.22	0.6	48.43	4.32	5.77	2345.52
Freon 114	36	0.55	12	1.69	0.6	2.93	1.73	2.78	8.61
Freon 12	36	0.55	93	12.23	1.4	24.28	1.98	2.26	589.47
Heptane	36	0.55	7.2	1.30	0.6	1.56	1.20	2.32	2.44
Hexane	36	0.55	11	1.63	0.6	2.03	1.24	3.20	4.10
Methyl tert-butyl ether	36	0.55	2.45	0.66	0.6	0.34	0.51	4.83	0.11
Methylene Chloride	36	0.55	13	1.68	0.6	3.02	1.80	3.27	9.10
Propylbenzene	36	0.55	2.45	0.70	0.6	0.39	0.55	3.71	0.15
Styrene	36	0.55	2.45	0.74	0.6	0.45	0.61	3.04	0.20
Tetrachloroethene	36	0.55	88	9.86	2.55	20.55	2.08	2.76	422.51
Tetrahydrofuran	36	0.55	2.45	0.68	0.6	0.35	0.51	4.33	0.12
Toluene	36	0.55	1000	43.20	4.9	172.32	3.99	5.29	29692.73
Trichloroethene	36	0.55	19	1.68	0.6	3.22	1.92	4.75	10.38
m,p-Xylene	36	0.55	150	10.50	3	26.18	2.49	4.72	685.31
o-Xylene	36	0.55	84	6.11	2	14.43	2.36	4.83	208.24

Data File

Variable: 1,2,4-Trimethylbenzene

Raw Statistics		
Number of Valid Samples	36	Normal Distribution Test
Number of Unique Samples	19	Shapiro-Wilk Test Statistic
Minimum	0.55	0.721975
Maximum	15	Shapiro-Wilk 5% Critical Value
Mean	3.023611	0.935
Median	1.6	Data not normal at 5% significance level
Standard Deviation	3.613397	95% UCL (Assuming Normal Distribution)
Variance	13.05664	Student's-t UCL
Coefficient of Variation	1.19506	4.041127
Skewness	1.868517	Gamma Distribution Test
Gamma Statistics		
k hat	0.985375	A-D Test Statistic
k star (bias corrected)	0.921779	2.020302
Theta hat	3.068489	A-D 5% Critical Value
Theta star	3.280192	0.776988
nu hat	70.94698	K-S Test Statistic
nu star	66.36806	0.233521
Approx.Chi Square Value (.05)	48.61733	K-S 5% Critical Value
Adjusted Level of Significance	0.0428	0.151238
Adjusted Chi Square Value	47.92689	Data do not follow gamma distribution at 5% significance level
Log-transformed Statistics		
Minimum of log data	-0.597837	95% UCLs (Assuming Gamma Distribution)
Maximum of log data	2.70805	Approximate Gamma UCL
Mean of log data	0.519651	4.127566
Standard Deviation of log data	1.074179	Adjusted Gamma UCL
Variance of log data	1.153862	4.187028
RECOMMENDATION		
Data are Non-parametric (0.05)		
Use 99% Chebyshev (Mean, Sd) UCL		
95% Non-parametric UCLs		
		CLT UCL
		4.014196
		Adj-CLT UCL (Adjusted for skewness)
		4.214593
		Mod-t UCL (Adjusted for skewness)
		4.072385
		Jackknife UCL
		4.041127
		Standard Bootstrap UCL
		4.022226
		Bootstrap-t UCL
		4.346784
		Hall's Bootstrap UCL
		4.286814
		Percentile Bootstrap UCL
		4.019444
		BCA Bootstrap UCL
		4.168056
		95% Chebyshev (Mean, Sd) UCL
		5.648683
		97.5% Chebyshev (Mean, Sd) UCL
		6.784554
		99% Chebyshev (Mean, Sd) UCL
		9.015753

Data File

Variable: 1,2-Dichlorobenzene

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	6
Minimum	0.55
Maximum	26
Mean	1.373611
Median	0.6
Standard Deviation	4.236162
Variance	17.94507
Coefficient of Variation	3.08396
Skewness	5.937567

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.201113
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)

Student's-t UCL	2.566495
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Gamma Distribution Test

A-D Test Statistic	11.30727
A-D 5% Critical Value	0.782503
K-S Test Statistic	0.512292
K-S 5% Critical Value	0.151937

Gamma Statistics

k hat	0.867111
k star (bias corrected)	0.81337
Theta hat	1.584123
Theta star	1.688789
nu hat	62.43201
nu star	58.56267
Approx.Chi Square Value (.05)	41.96552
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	41.32681

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.353821
Shapiro-Wilk 5% Critical Value	0.935
Data not lognormal at 5% significance level	

Log-transformed Statistics

Minimum of log data	-0.597837
Maximum of log data	3.258097
Mean of log data	-0.359917
Standard Deviation of log data	0.685416
Variance of log data	0.469796

95% Non-parametric UCLs

CLT UCL	2.534922
Adj-CLT UCL (Adjusted for skewness)	3.281472
Mod-t UCL (Adjusted for skewness)	2.682941
Jackknife UCL	2.566495
Standard Bootstrap UCL	2.5306
Bootstrap-t UCL	20.19953
Hall's Bootstrap UCL	19.20382
Percentile Bootstrap UCL	2.741667
BCA Bootstrap UCL	3.519444
95% Chebyshev (Mean, Sd) UCL	4.451112
97.5% Chebyshev (Mean, Sd) UCL	5.782748
99% Chebyshev (Mean, Sd) UCL	8.398491

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Data File

Variable: 1,3,5-Trimethylbenzene

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.601892
Number of Unique Samples	16	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	12		
Mean	1.773611	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	2.427256
Standard Deviation	2.321222		
Variance	5.388069		
Coefficient of Variation	1.308755	Gamma Distribution Test	
Skewness	2.92165	A-D Test Statistic	4.396384
Gamma Statistics		A-D 5% Critical Value	0.773487
k hat	1.142574	K-S Test Statistic	0.360186
k star (bias corrected)	1.065878	K-S 5% Critical Value	0.150704
Theta hat	1.552294	Data do not follow gamma distribution	
Theta star	1.66399	at 5% significance level	
nu hat	82.26536	95% UCLs (Assuming Gamma Distribution)	
nu star	76.74325	Approximate Gamma UCL	2.3647
Approx.Chi Square Value (.05)	57.56022	Adjusted Gamma UCL	2.396119
Adjusted Level of Significance	0.0428	Lognormal Distribution Test	
Adjusted Chi Square Value	56.80549	Shapiro-Wilk Test Statistic	0.740313
Log-transformed Statistics		Shapiro-Wilk 5% Critical Value	0.935
Minimum of log data	-0.597837	Data not lognormal at 5% significance level	
Maximum of log data	2.484907	95% Non-parametric UCLs	
Mean of log data	0.07537	CLT UCL	2.409956
Standard Deviation of log data	0.905991	Adj-CLT UCL (Adjusted for skewness)	2.611246
Variance of log data	0.82082	Mod-t UCL (Adjusted for skewness)	2.458654
		Jackknife UCL	2.427256
		Standard Bootstrap UCL	2.404107
		Bootstrap-t UCL	2.817407
		Hall's Bootstrap UCL	3.149854
		Percentile Bootstrap UCL	2.443056
		BCA Bootstrap UCL	2.695833
		95% Chebyshev (Mean, Sd) UCL	3.459939
		97.5% Chebyshev (Mean, Sd) UCL	4.189615
		99% Chebyshev (Mean, Sd) UCL	5.622922

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Data File		Variable: 1,3-Dichlorobenzene
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statistic 0.33015
Number of Unique Samples	5	Shapiro-Wilk 5% Critical Value 0.935
Minimum	0.55	Data not normal at 5% significance level
Maximum	2.45	
Mean	0.669444	95% UCL (Assuming Normal Distribution)
Median	0.6	Student's-t UCL 0.768048
Standard Deviation	0.350159	
Variance	0.122611	Gamma Distribution Test
Coefficient of Variation	0.523059	A-D Test Statistic 8.914091
Skewness	4.527001	A-D 5% Critical Value 0.748834
Gamma Statistics		K-S Test Statistic 0.432001
k hat	8.349285	K-S 5% Critical Value 0.146921
k star (bias corrected)	7.67203	Data do not follow gamma distribution at 5% significance level
Theta hat	0.08018	
Theta star	0.087258	95% UCLs (Assuming Gamma Distribution)
nu hat	601.1485	Approximate Gamma UCL 0.741268
nu star	552.3861	Adjusted Gamma UCL 0.744705
Approx.Chi Square Value (.05)	498.8636	
Adjusted Level of Significance	0.0428	Lognormal Distribution Test
Adjusted Chi Square Value	496.5618	Shapiro-Wilk Test Statistic 0.416278
Log-transformed Statistics		Shapiro-Wilk 5% Critical Value 0.935
Minimum of log data	-0.597837	Data not lognormal at 5% significance level
Maximum of log data	0.896088	
Mean of log data	-0.462386	95% Non-parametric UCLs
Standard Deviation of log data	0.291785	CLT UCL 0.765438
Variance of log data	0.085139	Adj-CLT UCL (Adjusted for skewness) 0.812487
RECOMMENDATION		Mod-t UCL (Adjusted for skewness) 0.775386
Data are Non-parametric (0.05)		Jackknife UCL 0.768048
Use Student's-t UCL or Modified-t UCL		Standard Bootstrap UCL 0.765723
		Bootstrap-t UCL 1.553445
		Hall's Bootstrap UCL 1.364133
		Percentile Bootstrap UCL 0.776389
		BCA Bootstrap UCL 0.831944
		95% Chebyshev (Mean, Sd) UCL 0.923829
		97.5% Chebyshev (Mean, Sd) UCL 1.033901
		99% Chebyshev (Mean, Sd) UCL 1.250117

Data File		Variable: 1,4-Dichlorobenzene
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statisticic
Number of Unique Samples	5	Shapiro-Wilk 5% Critical Value
Minimum	0.55	Data not normal at 5% significance level
Maximum	3.9	
Mean	0.730556	95% UCL (Assuming Normal Distribution)
Median	0.6	Student's-t UCL
Standard Deviation	0.626587	0.907
Variance	0.392611	
Coefficient of Variation	0.857685	Gamma Distribution Test
Skewness	4.526083	A-D Test Statistic
Gamma Statistics		A-D 5% Critical Value
k hat	4.055464	K-S Test Statistic
k star (bias corrected)	3.736027	K-S 5% Critical Value
Theta hat	0.180141	Data do not follow gamma distribution
Theta star	0.195543	at 5% significance level
nu hat	291.9934	95% UCLs (Assuming Gamma Distribution)
nu star	268.994	Approximate Gamma UCL
Approx.Chi Square Value (.05)	232.0052	0.847029
Adjusted Level of Significance	0.0428	Adjusted Gamma UCL
Adjusted Chi Square Value	230.4489	0.852749
Log-transformed Statistics		Lognormal Distribution Test
Minimum of log data	-0.597837	Shapiro-Wilk Test Statisticic
Maximum of log data	1.360977	Shapiro-Wilk 5% Critical Value
Mean of log data	-0.442277	Data not lognormal at 5% significance level
Standard Deviation of log data	0.39417	
Variance of log data	0.15537	95% UCLs (Assuming Lognormal Distribution)
		95% H-UCL
		95% Chebyshev (MVUE) UCL
		97.5% Chebyshev (MVUE) UCL
		99% Chebyshev (MVUE) UCL
		95% Non-parametric UCLs
		CLT UCL
		Adj-CLT UCL (Adjusted for skewness)
RECOMMENDATION		Mod-t UCL (Adjusted for skewness)
Data are Non-parametric (0.05)		0.920129
Use Student's-t UCL		0.907
or Modified-t UCL		0.896448
		Bootstrap-t UCL
		Hall's Bootstrap UCL
		Percentile Bootstrap UCL
		BCA Bootstrap UCL
		95% Chebyshev (Mean, Sd) UCL
		97.5% Chebyshev (Mean, Sd) UCL
		99% Chebyshev (Mean, Sd) UCL

2butanone

Data File

Variable: 2-Butanone

Raw Statistics			
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.470606
Number of Unique Samples	28	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	110		
Mean	11.6625	95% UCL (Assuming Normal Distribution)	
Median	2.5	Student's-t UCL	18.82402
Standard Deviation	25.43196		
Variance	646.7845		
Coefficient of Variation	2.180661	Gamma Distribution Test	
Skewness	3.139438	A-D Test Statistic	3.972249
Gamma Statistics			
k hat	0.515607	A-D 5% Critical Value	0.81089
k star (bias corrected)	0.491158	K-S Test Statistic	0.309864
Theta hat	22.61898	K-S 5% Critical Value	0.155062
Theta star	23.7449	Data do not follow gamma distribution	
nu hat	37.12369	at 5% significance level	
nu star	35.36339		
Approx.Chi Square Value (.05)	22.75457	95% UCLs (Assuming Gamma Distribution)	
Adjusted Level of Significance	0.0428	Approximate Gamma UCL	18.12495
Adjusted Chi Square Value	22.29428	Adjusted Gamma UCL	18.49916
Log-transformed Statistics			
Minimum of log data	-0.597837	Lognormal Distribution Test	
Maximum of log data	4.70048	Shapiro-Wilk Test Statistic	0.879651
Mean of log data	1.230306	Shapiro-Wilk 5% Critical Value	0.935
Standard Deviation of log data	1.379737	Data not lognormal at 5% significance level	
Variance of log data	1.903675		
RECOMMENDATION			
Data are Non-parametric (0.05)			
Use 99% Chebyshev (Mean, Sd) UCL			
95% Non-parametric UCLs			
		CLT UCL	18.63447
		Adj-CLT UCL (Adjusted for skewness)	21.00426
		Mod-t UCL (Adjusted for skewness)	19.19366
		Jackknife UCL	18.82402
		Standard Bootstrap UCL	18.73567
		Bootstrap-t UCL	25.68253
		Hall's Bootstrap UCL	23.85882
		Percentile Bootstrap UCL	19.21667
		BCA Bootstrap UCL	21.55417
		95% Chebyshev (Mean, Sd) UCL	30.13839
		97.5% Chebyshev (Mean, Sd) UCL	38.13292
		99% Chebyshev (Mean, Sd) UCL	53.83663

2hexanone

Data File	Variable: 2-Hexanone		
Raw Statistics	Normal Distribution Test		
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.384165
Number of Unique Samples	12	Shapiro-Wilk 5% Critical Value	0.935
Minimum	2.2	Data not normal at 5% significance level	
Maximum	10		
Mean	2.806944	95% UCL (Assuming Normal Distribution)	
Median	2.4	Student's-t UCL	3.249047
Standard Deviation	1.569993		
Variance	2.464879		
Coefficient of Variation	0.559325	Gamma Distribution Test	
Skewness	3.777529	A-D Test Statistic	8.907404
Gamma Statistics		A-D 5% Critical Value	0.749408
k hat	6.800301	K-S Test Statistic	0.424556
k star (bias corrected)	6.252128	K-S 5% Critical Value	0.147051
Theta hat	0.412768	Data do not follow gamma distribution	
Theta star	0.448958	at 5% significance level	
nu hat	489.6217	95% UCLs (Assuming Gamma Distribution)	
nu star	450.1532	Approximate Gamma UCL	3.143546
Approx.Chi Square Value (.05)	401.9522	Adjusted Gamma UCL	3.159754
Adjusted Level of Significance	0.0428	Lognormal Distribution Test	
Adjusted Chi Square Value	399.8904	Shapiro-Wilk Test Statistic	0.456608
Log-transformed Statistics		Shapiro-Wilk 5% Critical Value	0.935
Minimum of log data	0.788457	Data not lognormal at 5% significance level	
Maximum of log data	2.302585	95% Non-parametric UCLs	
Mean of log data	0.956772	CLT UCL	3.237346
Standard Deviation of log data	0.329812	Adj-CLT UCL (Adjusted for skewness)	3.413375
Variance of log data	0.108776	Mod-t UCL (Adjusted for skewness)	3.276504
RECOMMENDATION		Jackknife UCL	3.249047
Data are Non-parametric (0.05)		Standard Bootstrap UCL	3.240575
Use Student's-t UCL or Modified-t UCL		Bootstrap-t UCL	3.930849
		Hall's Bootstrap UCL	3.389809
		Percentile Bootstrap UCL	3.288889
		BCA Bootstrap UCL	3.419444
		95% Chebyshev (Mean, Sd) UCL	3.947518
		97.5% Chebyshev (Mean, Sd) UCL	4.441045
		99% Chebyshev (Mean, Sd) UCL	5.410484

2propanol

Data File

Variable: 2-Propanol

Raw Statistics		
Number of Valid Samples	36	Normal Distribution Test
Number of Unique Samples	13	Shapiro-Wilk Test Statistic
Minimum	2.2	Shapiro-Wilk 5% Critical Value
Maximum	21	Data not normal at 5% significance level
Mean	3.558333	95% UCL (Assuming Normal Distribution)
Median	2.4	Student's-t UCL
Standard Deviation	3.786753	4.624665
Variance	14.3395	
Coefficient of Variation	1.064193	Gamma Distribution Test
Skewness	3.599022	A-D Test Statistic
Gamma Statistics		
k hat	2.38139	9.45914
k star (bias corrected)	2.201459	A-D 5% Critical Value
Theta hat	1.494225	0.757397
Theta star	1.616352	K-S Test Statistic
nu hat	171.4601	0.472486
nu star	158.5051	K-S 5% Critical Value
Approx.Chi Square Value (.05)	130.3935	0.148404
Adjusted Level of Significance	0.0428	Data do not follow gamma distribution
Adjusted Chi Square Value	129.2372	at 5% significance level
Log-transformed Statistics		
Minimum of log data	0.788457	95% UCLs (Assuming Gamma Distribution)
Maximum of log data	3.044522	Approximate Gamma UCL
Mean of log data	1.044877	4.325475
Standard Deviation of log data	0.538619	Adjusted Gamma UCL
Variance of log data	0.29011	4.364176
RECOMMENDATION		
Data are Non-parametric (0.05)		
Use 95% Chebyshev (Mean, Sd) UCL		
95% Non-parametric UCLs		
CLT UCL		4.596442
Adj-CLT UCL (Adjusted for skewness)		5.000953
Mod-t UCL (Adjusted for skewness)		4.687761
Jackknife UCL		4.624665
Standard Bootstrap UCL		4.585663
Bootstrap-t UCL		6.372411
Hall's Bootstrap UCL		5.07482
Percentile Bootstrap UCL		4.645833
BCA Bootstrap UCL		4.906944
95% Chebyshev (Mean, Sd) UCL		6.309346
97.5% Chebyshev (Mean, Sd) UCL		7.499711
99% Chebyshev (Mean, Sd) UCL		9.837953

4ethyltoluene

Data File		Variable: 4-Ethyltoluene	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.558342
Number of Unique Samples	17	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	20		
Mean	2.434722	95% UCL (Assuming Normal Distribution)	
Median	0.65	Student's-t UCL	3.497038
Standard Deviation	3.772491		
Variance	14.23169		
Coefficient of Variation	1.549454	Gamma Distribution Test	
Skewness	3.412872	A-D Test Statistic	3.374717
Gamma Statistics		A-D 5% Critical Value	0.779806
k hat	0.924936	K-S Test Statistic	0.276155
k star (bias corrected)	0.866377	K-S 5% Critical Value	0.151595
Theta hat	2.632313	Data do not follow gamma distribution at 5% significance level	
Theta star	2.810234		
nu hat	66.59543	95% UCLs (Assuming Gamma Distribution)	
nu star	62.37914	Approximate Gamma UCL	3.359428
Approx.Chi Square Value (.05)	45.20886	Adjusted Gamma UCL	3.409535
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	44.54446	Lognormal Distribution Test	
Log-transformed Statistics		Shapiro-Wilk Test Statistic	0.804855
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value	0.935
Maximum of log data	2.995732	Data not lognormal at 5% significance level	
Mean of log data	0.259906		
Standard Deviation of log data	1.015448	95% UCLs (Assuming Lognormal Distribution)	
Variance of log data	1.031135	95% H-UCL	3.284965
		95% Chebyshev (MVUE) UCL	3.952708
		97.5% Chebyshev (MVUE) UCL	4.74281
		99% Chebyshev (MVUE) UCL	6.294814
RECOMMENDATION		95% Non-parametric UCLs	
Data are Non-parametric (0.05)		CLT UCL	3.468921
Use 99% Chebyshev (Mean, Sd) UCL		Adj-CLT UCL (Adjusted for skewness)	3.851065
		Mod-t UCL (Adjusted for skewness)	3.556645
		Jackknife UCL	3.497038
		Standard Bootstrap UCL	3.449565
		Bootstrap-t UCL	4.45031
		Hall's Bootstrap UCL	7.892988
		Percentile Bootstrap UCL	3.558333
		BCA Bootstrap UCL	3.895833
		95% Chebyshev (Mean, Sd) UCL	5.175373
		97.5% Chebyshev (Mean, Sd) UCL	6.361255
		99% Chebyshev (Mean, Sd) UCL	8.690691

4methyl2pent

Data File		Variable: 4-Methyl-2-pentanone
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statistic 0.329096
Number of Unique Samples	5	Shapiro-Wilk 5% Critical Value 0.935
Minimum	0.55	Data not normal at 5% significance level
Maximum	2.45	
Mean	0.677778	95% UCL (Assuming Normal Distribution)
Median	0.6	Student's-t UCL 0.783541
Standard Deviation	0.375584	
Variance	0.141063	Gamma Distribution Test
Coefficient of Variation	0.554141	A-D Test Statistic 9.235369
Skewness	4.201847	A-D 5% Critical Value 0.74917
Gamma Statistics		K-S Test Statistic 0.44062
k hat	7.443215	K-S 5% Critical Value 0.146997
k star (bias corrected)	6.841465	Data do not follow gamma distribution at 5% significance level
Theta hat	0.09106	
Theta star	0.099069	95% UCLs (Assuming Gamma Distribution)
nu hat	535.9115	Approximate Gamma UCL 0.755161
nu star	492.5855	Adjusted Gamma UCL 0.758876
Approx.Chi Square Value (.05)	442.1091	
Adjusted Level of Significance	0.0428	Lognormal Distribution Test
Adjusted Chi Square Value	439.9447	Shapiro-Wilk Test Statistic 0.405663
Log-transformed Statistics		Shapiro-Wilk 5% Critical Value 0.935
Minimum of log data	-0.597837	Data not lognormal at 5% significance level
Maximum of log data	0.896088	
Mean of log data	-0.457613	95% Non-parametric UCLs
Standard Deviation of log data	0.308407	CLT UCL 0.780741
Variance of log data	0.095115	Adj-CLT UCL (Adjusted for skewness) 0.827582
		Mod-t UCL (Adjusted for skewness) 0.790847
RECOMMENDATION		Jackknife UCL 0.783541
Data are Non-parametric (0.05)		Standard Bootstrap UCL 0.779028
Use Student's-t UCL		Bootstrap-t UCL 1.721882
or Modified-t UCL		Hall's Bootstrap UCL 1.484381
		Percentile Bootstrap UCL 0.788889
		BCA Bootstrap UCL 0.829167
		95% Chebyshev (Mean, Sd) UCL 0.950633
		97.5% Chebyshev (Mean, Sd) UCL 1.068698
		99% Chebyshev (Mean, Sd) UCL 1.300614

acetone

Data File

Variable: Acetone

Raw Statistics		
Number of Valid Samples	36	Normal Distribution Test
Number of Unique Samples	26	Shapiro-Wilk Test Statistic
Minimum	2.2	Shapiro-Wilk 5% Critical Value
Maximum	130	Data not normal at 5% significance level
Mean	15.61528	95% UCL (Assuming Normal Distribution)
Median	7.85	Student's-t UCL
Standard Deviation	25.66415	
Variance	658.6487	Gamma Distribution Test
Coefficient of Variation	1.643528	A-D Test Statistic
Skewness	3.356039	A-D 5% Critical Value
Gamma Statistics		
k hat	0.855972	K-S Test Statistic
k star (bias corrected)	0.803159	K-S 5% Critical Value
Theta hat	18.24275	Data do not follow gamma distribution
Theta star	19.44232	at 5% significance level
nu hat	61.62997	95% UCLs (Assuming Gamma Distribution)
nu star	57.82747	Approximate Gamma UCL
Approx.Chi Square Value (.05)	41.34286	Adjusted Gamma UCL
Adjusted Level of Significance	0.0428	
Adjusted Chi Square Value	40.70921	Lognormal Distribution Test
Log-transformed Statistics		
Minimum of log data	0.788457	Shapiro-Wilk Test Statistic
Maximum of log data	4.867534	Shapiro-Wilk 5% Critical Value
Mean of log data	2.060946	Data not lognormal at 5% significance level
Standard Deviation of log data	1.078383	95% UCLs (Assuming Lognormal Distribution)
Variance of log data	1.16291	95% H-UCL
RECOMMENDATION		
Data are Non-parametric (0.05)		
Use 99% Chebyshev (Mean, Sd) UCL		
95% Non-parametric UCLs		
	CLT UCL	22.65091
	Adj-CLT UCL (Adjusted for skewness)	25.20732
	Mod-t UCL (Adjusted for skewness)	23.24093
	Jackknife UCL	22.84218
	Standard Bootstrap UCL	22.57891
	Bootstrap-t UCL	30.08663
	Hall's Bootstrap UCL	51.83279
	Percentile Bootstrap UCL	22.95694
	BCA Bootstrap UCL	25.27222
	95% Chebyshev (Mean, Sd) UCL	34.25985
	97.5% Chebyshev (Mean, Sd) UCL	42.32737
	99% Chebyshev (Mean, Sd) UCL	58.17446

benzene

Data File

Variable: Benzene

Raw Statistics		
Number of Valid Samples	36	Normal Distribution Test
Number of Unique Samples	20	Shapiro-Wilk Test Statistic
Minimum	0.55	Shapiro-Wilk 5% Critical Value
Maximum	7	Data not normal at 5% significance level
Mean	1.961111	95% UCL (Assuming Normal Distribution)
Median	0.925	Student's-t UCL
Standard Deviation	1.914535	
Variance	3.665444	Gamma Distribution Test
Coefficient of Variation	0.97625	A-D Test Statistic
Skewness	1.398497	A-D 5% Critical Value
Gamma Statistics		
k hat	1.351562	K-S Test Statistic
k star (bias corrected)	1.25745	K-S 5% Critical Value
Theta hat	1.450996	
Theta star	1.559593	95% UCLs (Assuming Gamma Distribution)
nu hat	97.31246	Approximate Gamma UCL
nu star	90.53642	Adjusted Gamma UCL
Approx.Chi Square Value (.05)	69.5926	
Adjusted Level of Significance	0.0428	Lognormal Distribution Test
Adjusted Chi Square Value	68.75876	Shapiro-Wilk Test Statistic
Log-transformed Statistics		
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value
Maximum of log data	1.94591	Data not lognormal at 5% significance level
Mean of log data	0.260003	95% UCLs (Assuming Lognormal Distribution)
Standard Deviation of log data	0.898356	95% H-UCL
Variance of log data	0.807044	95% Chebyshev (MVUE) UCL
		97.5% Chebyshev (MVUE) UCL
		99% Chebyshev (MVUE) UCL
RECOMMENDATION		
Data are Non-parametric (0.05)		
Use 95% Chebyshev (Mean, Sd) UCL		
		95% Non-parametric UCLs
		CLT UCL
		Adj-CLT UCL (Adjusted for skewness)
		Mod-t UCL (Adjusted for skewness)
		Jackknife UCL
		Standard Bootstrap UCL
		Bootstrap-t UCL
		Hall's Bootstrap UCL
		Percentile Bootstrap UCL
		BCA Bootstrap UCL
		95% Chebyshev (Mean, Sd) UCL
		97.5% Chebyshev (Mean, Sd) UCL
		99% Chebyshev (Mean, Sd) UCL

Data File

Variable: Bromodichloromethane

Raw Statistics			
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	
Number of Unique Samples	8	Shapiro-Wilk 5% Critical Value	
Minimum	0.55	Data not normal at 5% significance level	
Maximum	5.6		
Mean	0.986111	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	
Standard Deviation	1.100105		
Variance	1.21023		
Coefficient of Variation	1.115599	Gamma Distribution Test	
Skewness	3.010118	A-D Test Statistic	8.802816
Gamma Statistics			
k hat	1.940659	A-D 5% Critical Value	0.760383
k star (bias corrected)	1.797456	K-S Test Statistic	0.476894
Theta hat	0.508132	K-S 5% Critical Value	0.148866
Theta star	0.548615	Data do not follow gamma distribution	
nu hat	139.7275	at 5% significance level	
nu star	129.4168		
Approx.Chi Square Value (.05)	104.1338	95% UCLs (Assuming Gamma Distribution)	
Adjusted Level of Significance	0.0428	Approximate Gamma UCL	1.225533
Adjusted Chi Square Value	103.1048	Adjusted Gamma UCL	1.237764
Log-transformed Statistics			
Minimum of log data	-0.597837	Lognormal Distribution Test	
Maximum of log data	1.722767	Shapiro-Wilk Test Statistic	0.515407
Mean of log data	-0.29323	Shapiro-Wilk 5% Critical Value	0.935
Standard Deviation of log data	0.616531	Data not lognormal at 5% significance level	
Variance of log data	0.38011		
RECOMMENDATION			
Data are Non-parametric (0.05)			
Use 95% Chebyshev (Mean, Sd) UCL			
95% Non-parametric UCLs			
		CLT UCL	1.287696
		Adj-CLT UCL (Adjusted for skewness)	1.385983
		Mod-t UCL (Adjusted for skewness)	1.311226
		Jackknife UCL	1.295895
		Standard Bootstrap UCL	1.283088
		Bootstrap-t UCL	1.568085
		Hall's Bootstrap UCL	1.335891
		Percentile Bootstrap UCL	1.297222
		BCA Bootstrap UCL	1.388889
		95% Chebyshev (Mean, Sd) UCL	1.785319
		97.5% Chebyshev (Mean, Sd) UCL	2.131136
		99% Chebyshev (Mean, Sd) UCL	2.810428

carbonS2

Data File

Variable: Carbon Disulfide

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	27
Minimum	0.55
Maximum	130
Mean	11.00139
Median	3.1
Standard Deviation	22.2473
Variance	494.9422
Coefficient of Variation	2.022226
Skewness	4.657757

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.463847
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)

Student's-t UCL	17.26612
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Gamma Distribution Test

A-D Test Statistic	1.457852
A-D 5% Critical Value	0.798757
K-S Test Statistic	0.17941
K-S 5% Critical Value	0.153774

Gamma Statistics

k hat	0.639651
k star (bias corrected)	0.604866
Theta hat	17.19904
Theta star	18.18816
nu hat	46.05489
nu star	43.55032
Approx.Chi Square Value (.05)	29.41474
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	28.88627

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.950068
Shapiro-Wilk 5% Critical Value	0.935
Data are lognormal at 5% significance level	

Log-transformed Statistics

Minimum of log data	-0.597837
Maximum of log data	4.867534
Mean of log data	1.441045
Standard Deviation of log data	1.349602
Variance of log data	1.821425

95% Non-parametric UCLs

CLT UCL	17.10031
Adj-CLT UCL (Adjusted for skewness)	20.17593
Mod-t UCL (Adjusted for skewness)	17.74586
Jackknife UCL	17.26612
Standard Bootstrap UCL	16.99343
Bootstrap-t UCL	26.11992
Hall's Bootstrap UCL	39.42961
Percentile Bootstrap UCL	17.95417
BCA Bootstrap UCL	21.39167
95% Chebyshev (Mean, Sd) UCL	27.16368
97.5% Chebyshev (Mean, Sd) UCL	34.15711
99% Chebyshev (Mean, Sd) UCL	47.89436

RECOMMENDATION

Data are lognormal (0.05)

Use H-UCL

chlorobenz

Data File	Variable: Chlorobenzene		
Raw Statistics	Normal Distribution Test		
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.314911
Number of Unique Samples	5	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	2.45		
Mean	0.656944	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	0.748635
Standard Deviation	0.32561		
Variance	0.106022	Gamma Distribution Test	
Coefficient of Variation	0.495643	A-D Test Statistic	8.361138
Skewness	5.175593	A-D 5% Critical Value	0.748347
Gamma Statistics		K-S Test Statistic	0.414708
k hat	9.662418	K-S 5% Critical Value	0.14681
k star (bias corrected)	8.875735	Data do not follow gamma distribution	
Theta hat	0.06799	at 5% significance level	
Theta star	0.074016	95% UCLs (Assuming Gamma Distribution)	
nu hat	695.6941	Approximate Gamma UCL	0.722095
nu star	639.0529	Adjusted Gamma UCL	0.725198
Approx.Chi Square Value (.05)	581.3952	Lognormal Distribution Test	
Adjusted Level of Significance	0.0428	Shapiro-Wilk Test Statistic	0.424843
Adjusted Chi Square Value	578.9069	Shapiro-Wilk 5% Critical Value	0.935
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-0.597837	95% Non-parametric UCLs	
Maximum of log data	0.896088	CLT UCL	0.746208
Mean of log data	-0.472794	Adj-CLT UCL (Adjusted for skewness)	0.796227
Standard Deviation of log data	0.269298	Mod-t UCL (Adjusted for skewness)	0.756437
Variance of log data	0.072521	Jackknife UCL	0.748635
RECOMMENDATION		Standard Bootstrap UCL	0.745288
Data are Non-parametric (0.05)		Bootstrap-t UCL	1.314534
Use Student's-t UCL or Modified-t UCL		Hall's Bootstrap UCL	1.216485
		Percentile Bootstrap UCL	0.759722
		BCA Bootstrap UCL	0.8125
		95% Chebyshev (Mean, Sd) UCL	0.893495
		97.5% Chebyshev (Mean, Sd) UCL	0.99585
		99% Chebyshev (Mean, Sd) UCL	1.196907

chloroform

Data File		Variable: Chloroform	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.576435
Number of Unique Samples	24	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	44		
Mean	5.704167	95% UCL (Assuming Normal Distribution)	
Median	2.375	Student's-t UCL	8.430607
Standard Deviation	9.682122		
Variance	93.74348	Gamma Distribution Test	
Coefficient of Variation	1.697377	A-D Test Statistic	2.327266
Skewness	2.718675	A-D 5% Critical Value	0.796433
Gamma Statistics		K-S Test Statistic	0.216501
k hat	0.66341	K-S 5% Critical Value	0.153527
k star (bias corrected)	0.626644	Data do not follow gamma distribution at 5% significance level	
Theta hat	8.598256		
Theta star	9.102722	95% UCLs (Assuming Gamma Distribution)	
nu hat	47.7655	Approximate Gamma UCL	8.381114
nu star	45.11837	Adjusted Gamma UCL	8.531361
Approx.Chi Square Value (.05)	30.70746	Lognormal Distribution Test	
Adjusted Level of Significance	0.0428	Shapiro-Wilk Test Statistic	0.883999
Adjusted Chi Square Value	30.16667	Shapiro-Wilk 5% Critical Value	0.935
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-0.597837		
Maximum of log data	3.78419	95% UCLs (Assuming Lognormal Distribution)	
Mean of log data	0.823307	95% H-UCL	9.654265
Standard Deviation of log data	1.296208	95% Chebyshev (MVUE) UCL	10.97125
Variance of log data	1.680155	97.5% Chebyshev (MVUE) UCL	13.52557
		99% Chebyshev (MVUE) UCL	18.54303
RECOMMENDATION		95% Non-parametric UCLs	
Data are Non-parametric (0.05)		CLT UCL	8.358446
Use 99% Chebyshev (Mean, Sd) UCL		Adj-CLT UCL (Adjusted for skewness)	9.139724
		Mod-t UCL (Adjusted for skewness)	8.552471
		Jackknife UCL	8.430607
		Standard Bootstrap UCL	8.303754
		Bootstrap-t UCL	10.07143
		Hall's Bootstrap UCL	8.964761
		Percentile Bootstrap UCL	8.422222
		BCA Bootstrap UCL	9.155556
		95% Chebyshev (Mean, Sd) UCL	12.73807
		97.5% Chebyshev (Mean, Sd) UCL	15.78164
		99% Chebyshev (Mean, Sd) UCL	21.76015

cyclohexane

Data File	Variable: Cyclohexane		
Raw Statistics	Normal Distribution Test		
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.548231
Number of Unique Samples	17	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	24		
Mean	2.697222	95% UCL (Assuming Normal Distribution)	
Median	0.625	Student's-t UCL	3.927921
Standard Deviation	4.370452		
Variance	19.10085	Gamma Distribution Test	
Coefficient of Variation	1.620353	A-D Test Statistic	3.513855
Skewness	3.654711	A-D 5% Critical Value	0.783392
Gamma Statistics		K-S Test Statistic	0.30447
k hat	0.848039	K-S 5% Critical Value	0.152049
k star (bias corrected)	0.795888	Data do not follow gamma distribution	
Theta hat	3.180539	at 5% significance level	
Theta star	3.388948	95% UCLs (Assuming Gamma Distribution)	
nu hat	61.05883	Approximate Gamma UCL	3.779017
nu star	57.30392	Adjusted Gamma UCL	3.838142
Approx.Chi Square Value (.05)	40.8999		
Adjusted Level of Significance	0.0428	Lognormal Distribution Test	
Adjusted Chi Square Value	40.26986	Shapiro-Wilk Test Statistic	0.792301
Log-transformed Statistics		Shapiro-Wilk 5% Critical Value	0.935
Minimum of log data	-0.597837	Data not lognormal at 5% significance level	
Maximum of log data	3.178054	95% Non-parametric UCLs	
Mean of log data	0.297664	CLT UCL	3.895348
Standard Deviation of log data	1.076402	Adj-CLT UCL (Adjusted for skewness)	4.369434
Variance of log data	1.158641	Mod-t UCL (Adjusted for skewness)	4.001869
		Jackknife UCL	3.927921
		Standard Bootstrap UCL	3.862495
		Bootstrap-t UCL	5.006593
		Hall's Bootstrap UCL	8.574305
RECOMMENDATION		Percentile Bootstrap UCL	4.069444
Data are Non-parametric (0.05)		BCA Bootstrap UCL	4.594444
Use 99% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	5.872282
		97.5% Chebyshev (Mean, Sd) UCL	7.246133
		99% Chebyshev (Mean, Sd) UCL	9.944797

Data File		Variable: Dibromochloromethane
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statisticic
Number of Unique Samples	5	0.331218
Minimum	0.55	Shapiro-Wilk 5% Critical Value
Maximum	2.45	0.935
Mean	0.668056	Data not normal at 5% significance level
Median	0.6	95% UCL (Assuming Normal Distribution)
Standard Deviation	0.350541	Student's-t UCL
Variance	0.122879	0.766766
Coefficient of Variation	0.524718	Gamma Distribution Test
Skewness	4.523831	A-D Test Statistic
Gamma Statistics		8.845398
k hat	8.303931	A-D 5% Critical Value
k star (bias corrected)	7.630455	0.748851
Theta hat	0.080451	K-S Test Statistic
Theta star	0.087551	0.429426
nu hat	597.883	K-S 5% Critical Value
nu star	549.3927	0.146924
Approx.Chi Square Value (.05)	496.0186	Data do not follow gamma distribution
Adjusted Level of Significance	0.0428	at 5% significance level
Adjusted Chi Square Value	493.7236	95% UCLs (Assuming Gamma Distribution)
Log-transformed Statistics		Approximate Gamma UCL
Minimum of log data	-0.597837	0.739942
Maximum of log data	0.896088	Adjusted Gamma UCL
Mean of log data	-0.464803	0.743381
Standard Deviation of log data	0.292557	Lognormal Distribution Test
Variance of log data	0.08559	Shapiro-Wilk Test Statisticic
		0.418267
		Shapiro-Wilk 5% Critical Value
		0.935
		Data not lognormal at 5% significance level
RECOMMENDATION		95% Non-parametric UCLs
Data are Non-parametric (0.05)		CLT UCL
Use Student's-t UCL		0.764154
or Modified-t UCL		Adj-CLT UCL (Adjusted for skewness)
		0.811221
		Mod-t UCL (Adjusted for skewness)
		0.774108
		Jackknife UCL
		0.766766
		Standard Bootstrap UCL
		0.762186
		Bootstrap-t UCL
		1.502833
		Hall's Bootstrap UCL
		1.347959
		Percentile Bootstrap UCL
		0.773611
		BCA Bootstrap UCL
		0.826389
		95% Chebyshev (Mean, Sd) UCL
		0.922718
		97.5% Chebyshev (Mean, Sd) UCL
		1.03291
		99% Chebyshev (Mean, Sd) UCL
		1.249362

ethanol

Data File

Variable: Ethanol

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	19
Minimum	2.2
Maximum	50
Mean	5.795833
Median	2.4
Standard Deviation	8.323473
Variance	69.2802
Coefficient of Variation	1.436113
Skewness	4.532865

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.456733
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)

Student's-t UCL 8.139685

Gamma Statistics

k hat	1.366533
k star (bias corrected)	1.271174
Theta hat	4.241268
Theta star	4.559434
nu hat	98.39039
nu star	91.52453
Approx.Chi Square Value (.05)	70.45992
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	69.62066

Gamma Distribution Test

A-D Test Statistic	4.735113
A-D 5% Critical Value	0.769059
K-S Test Statistic	0.372753
K-S 5% Critical Value	0.150001

Data do not follow gamma distribution

at 5% significance level

95% UCLs (Assuming Gamma Distribution)

Approximate Gamma UCL	7.528548
Adjusted Gamma UCL	7.619303

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.709813
Shapiro-Wilk 5% Critical Value	0.935
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	6.944676
95% Chebyshev (MVUE) UCL	8.404467
97.5% Chebyshev (MVUE) UCL	9.805308
99% Chebyshev (MVUE) UCL	12.55699

95% Non-parametric UCLs

CLT UCL	8.077649
Adj-CLT UCL (Adjusted for skewness)	9.197487
Mod-t UCL (Adjusted for skewness)	8.314357
Jackknife UCL	8.139685
Standard Bootstrap UCL	8.046592
Bootstrap-t UCL	11.00139
Hall's Bootstrap UCL	16.82885
Percentile Bootstrap UCL	8.186111
BCA Bootstrap UCL	9.479167
95% Chebyshev (Mean, Sd) UCL	11.8427
97.5% Chebyshev (Mean, Sd) UCL	14.45918
99% Chebyshev (Mean, Sd) UCL	19.59875

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

ethylbenz

Data File		Variable: Ethyl Benzene	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.350317
Number of Unique Samples	18	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	67		
Mean	4.275	95% UCL (Assuming Normal Distribution)	
Median	0.875	Student's-t UCL	7.479804
Standard Deviation	11.38088		
Variance	129.5245		
Coefficient of Variation	2.662195	Gamma Distribution Test	
Skewness	5.122282	A-D Test Statistic	4.102715
Gamma Statistics		A-D 5% Critical Value	0.803033
k hat	0.595936	K-S Test Statistic	0.241103
k star (bias corrected)	0.564794	K-S 5% Critical Value	0.154228
Theta hat	7.173583	Data do not follow gamma distribution at 5% significance level	
Theta star	7.569136		
nu hat	42.90743	95% UCLs (Assuming Gamma Distribution)	
nu star	40.66514	Approximate Gamma UCL	6.426843
Approx.Chi Square Value (.05)	27.04959	Adjusted Gamma UCL	6.549169
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	26.54436	Lognormal Distribution Test	
Log-transformed Statistics		Shapiro-Wilk Test Statistic	0.808935
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value	0.935
Maximum of log data	4.204693	Data not lognormal at 5% significance level	
Mean of log data	0.414927		
Standard Deviation of log data	1.182435	95% UCLs (Assuming Lognormal Distribution)	
Variance of log data	1.398152	95% H-UCL	5.134292
		95% Chebyshev (MVUE) UCL	6.01482
		97.5% Chebyshev (MVUE) UCL	7.339896
		99% Chebyshev (MVUE) UCL	9.942751
95% Non-parametric UCLs			
RECOMMENDATION		CLT UCL	7.394981
Data are Non-parametric (0.05)		Adj-CLT UCL (Adjusted for skewness)	9.125265
Use 99% Chebyshev (Mean, Sd) UCL		Mod-t UCL (Adjusted for skewness)	7.749693
		Jackknife UCL	7.479804
		Standard Bootstrap UCL	7.359965
		Bootstrap-t UCL	15.77499
		Hall's Bootstrap UCL	19.37022
		Percentile Bootstrap UCL	7.813889
		BCA Bootstrap UCL	10.12639
		95% Chebyshev (Mean, Sd) UCL	12.54302
		97.5% Chebyshev (Mean, Sd) UCL	16.1206
		99% Chebyshev (Mean, Sd) UCL	23.14806

Data File

Variable: Freon 11

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.476617
Number of Unique Samples	7	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	2.7		
Mean	0.776389	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	0.922264
Standard Deviation	0.51803		
Variance	0.268355		
Coefficient of Variation	0.66723		
Skewness	2.815057		
Gamma Statistics		Gamma Distribution Test	
k hat	4.363308	A-D Test Statistic	7.978857
k star (bias corrected)	4.018218	A-D 5% Critical Value	0.75168
Theta hat	0.177936	K-S Test Statistic	0.439551
Theta star	0.193217	K-S 5% Critical Value	0.147415
nu hat	314.1582	Data do not follow gamma distribution	
nu star	289.3117	at 5% significance level	
Approx.Chi Square Value (.05)	250.9068		
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	249.2867		
Log-transformed Statistics		Lognormal Distribution Test	
Minimum of log data	-0.597837	Shapiro-Wilk Test Statistic	0.540501
Maximum of log data	0.993252	Shapiro-Wilk 5% Critical Value	0.935
Mean of log data	-0.372048	Data not lognormal at 5% significance level	
Standard Deviation of log data	0.424492		
Variance of log data	0.180193		
		95% UCLs (Assuming Lognormal Distribution)	
		95% H-UCL	0.862096
		95% Chebyshev (MVUE) UCL	0.992169
		97.5% Chebyshev (MVUE) UCL	1.095974
		99% Chebyshev (MVUE) UCL	1.299878
		95% Non-parametric UCLs	
		CLT UCL	0.918403
		Adj-CLT UCL (Adjusted for skewness)	0.961686
		Mod-t UCL (Adjusted for skewness)	0.929015
		Jackknife UCL	0.922264
		Standard Bootstrap UCL	0.915767
		Bootstrap-t UCL	1.002407
		Hall's Bootstrap UCL	0.957869
		Percentile Bootstrap UCL	0.916667
		BCA Bootstrap UCL	0.976389
		95% Chebyshev (Mean, Sd) UCL	1.152729
		97.5% Chebyshev (Mean, Sd) UCL	1.315572
		99% Chebyshev (Mean, Sd) UCL	1.635445

RECOMMENDATION

Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Data File		Variable: Freon 113	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.239458
Number of Unique Samples	12	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	290		
Mean	11.21528	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	24.85309
Standard Deviation	48.43054		
Variance	2345.518	Gamma Distribution Test	
Coefficient of Variation	4.318265	A-D Test Statistic	8.684104
Skewness	5.766933	A-D 5% Critical Value	0.855204
Gamma Statistics		K-S Test Statistic	0.427281
k hat	0.306739	K-S 5% Critical Value	0.159205
k star (bias corrected)	0.299696	Data do not follow gamma distribution	
Theta hat	36.56293	at 5% significance level	
Theta star	37.42218	95% UCLs (Assuming Gamma Distribution)	
nu hat	22.08521	Approximate Gamma UCL	20.13189
nu star	21.57811	Adjusted Gamma UCL	20.69075
Approx.Chi Square Value (.05)	12.02096	Lognormal Distribution Test	
Adjusted Level of Significance	0.0428	Shapiro-Wilk Test Statistic	0.587699
Adjusted Chi Square Value	11.69627	Shapiro-Wilk 5% Critical Value	0.935
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-0.597837	95% Non-parametric UCLs	
Maximum of log data	5.669881	CLT UCL	24.49214
Mean of log data	0.177361	Adj-CLT UCL (Adjusted for skewness)	32.7819
Standard Deviation of log data	1.490221	Mod-t UCL (Adjusted for skewness)	26.14613
Variance of log data	2.220759	Jackknife UCL	24.85309
		Standard Bootstrap UCL	24.32164
		Bootstrap-t UCL	93.82874
		Hall's Bootstrap UCL	95.03932
RECOMMENDATION		Percentile Bootstrap UCL	27.14722
Data are Non-parametric (0.05)		BCA Bootstrap UCL	36.5375
Use 99% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	46.39925
		97.5% Chebyshev (Mean, Sd) UCL	61.62339
		99% Chebyshev (Mean, Sd) UCL	91.52825

Data File		Variable: Freon 114	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.44617
Number of Unique Samples	9	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	12		
Mean	1.693056	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	2.519439
Standard Deviation	2.934649		
Variance	8.612165		
Coefficient of Variation	1.733345	Gamma Distribution Test	
Skewness	2.780977	A-D Test Statistic	8.994548
Gamma Statistics		A-D 5% Critical Value	0.782234
k hat	0.872887	K-S Test Statistic	0.485927
k star (bias corrected)	0.818665	K-S 5% Critical Value	0.151902
Theta hat	1.939604	Data do not follow gamma distribution	
Theta star	2.068069	at 5% significance level	
nu hat	62.84787	95% UCLs (Assuming Gamma Distribution)	
nu star	58.94389	Approximate Gamma UCL	2.359859
Approx.Chi Square Value (.05)	42.28865	Adjusted Gamma UCL	2.396198
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	41.64735	Lognormal Distribution Test	
Log-transformed Statistics		Shapiro-Wilk Test Statistic	0.516001
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value	0.935
Maximum of log data	2.484907	Data not lognormal at 5% significance level	
Mean of log data	-0.145779		
Standard Deviation of log data	0.927553	95% Non-parametric UCLs	
Variance of log data	0.860354	CLT UCL	2.497567
		Adj-CLT UCL (Adjusted for skewness)	2.739799
		Mod-t UCL (Adjusted for skewness)	2.557222
		Jackknife UCL	2.519439
		Standard Bootstrap UCL	2.487601
		Bootstrap-t UCL	3.020657
		Hall's Bootstrap UCL	2.519833
		Percentile Bootstrap UCL	2.559722
		BCA Bootstrap UCL	2.770833
RECOMMENDATION		95% Chebyshev (Mean, Sd) UCL	3.825029
Data are Non-parametric (0.05)		97.5% Chebyshev (Mean, Sd) UCL	4.747535
Use 95% Chebyshev (Mean, Sd) UCL		99% Chebyshev (Mean, Sd) UCL	6.55962

freon 12

Data File

Variable: Freon 12

Raw Statistics		
Number of Valid Samples	36	Normal Distribution Test
Number of Unique Samples	19	Shapiro-Wilk Test Statistic
Minimum	0.55	Shapiro-Wilk 5% Critical Value
Maximum	93	Data not normal at 5% significance level
Mean	12.23194	95% UCL (Assuming Normal Distribution)
Median	1.4	Student's-t UCL
Standard Deviation	24.27901	19.0688
Variance	589.4703	
Coefficient of Variation	1.984886	Gamma Distribution Test
Skewness	2.258231	A-D Test Statistic
Gamma Statistics		
k hat	0.410783	4.287835
k star (bias corrected)	0.395069	A-D 5% Critical Value
Theta hat	29.77715	0.832169
Theta star	30.9615	K-S Test Statistic
nu hat	29.57636	0.296698
nu star	28.445	K-S 5% Critical Value
Approx.Chi Square Value (.05)	17.27294	0.157062
Adjusted Level of Significance	0.0428	Data do not follow gamma distribution
Adjusted Chi Square Value	16.87664	at 5% significance level
Log-transformed Statistics		
Minimum of log data	-0.597837	95% UCLs (Assuming Gamma Distribution)
Maximum of log data	4.532599	Approximate Gamma UCL
Mean of log data	0.90898	20.14351
Standard Deviation of log data	1.679229	Adjusted Gamma UCL
Variance of log data	2.819811	20.61652
Lognormal Distribution Test		
		Shapiro-Wilk Test Statistic
		0.801691
		Shapiro-Wilk 5% Critical Value
		0.935
		Data not lognormal at 5% significance level
95% Non-parametric UCLs		
		CLT UCL
		18.88785
		Adj-CLT UCL (Adjusted for skewness)
		20.51518
		Mod-t UCL (Adjusted for skewness)
		19.32263
		Jackknife UCL
		19.0688
		Standard Bootstrap UCL
		18.75765
		Bootstrap-t UCL
		22.61398
		Hall's Bootstrap UCL
		18.95137
		Percentile Bootstrap UCL
		18.89861
		BCA Bootstrap UCL
		20.83889
		95% Chebyshev (Mean, Sd) UCL
		29.87024
		97.5% Chebyshev (Mean, Sd) UCL
		37.50234
		99% Chebyshev (Mean, Sd) UCL
		52.49413

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

heptane

Data File

Variable: Heptane

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	11
Minimum	0.55
Maximum	7.2
Mean	1.302778
Median	0.6
Standard Deviation	1.560904
Variance	2.436421
Coefficient of Variation	1.198135
Skewness	2.323837

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.551432
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

Gamma Statistics

k hat	1.379484
k star (bias corrected)	1.283046
Theta hat	0.944395
Theta star	1.015379
nu hat	99.32287
nu star	92.3793
Approx.Chi Square Value (.05)	71.21074
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	70.3668

Gamma Distribution Test

A-D Test Statistic	7.36827
A-D 5% Critical Value	0.768803
K-S Test Statistic	0.445113
K-S 5% Critical Value	0.14996

Log-transformed Statistics

Minimum of log data	-0.597837
Maximum of log data	1.974081
Mean of log data	-0.139842
Standard Deviation of log data	0.780953
Variance of log data	0.609888

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.600396
Shapiro-Wilk 5% Critical Value	0.935
Data not lognormal at 5% significance level	

95% Non-parametric UCLs

CLT UCL	1.730687
Adj-CLT UCL (Adjusted for skewness)	1.838349
Mod-t UCL (Adjusted for skewness)	1.759114
Jackknife UCL	1.742321
Standard Bootstrap UCL	1.721545
Bootstrap-t UCL	1.962668
Hall's Bootstrap UCL	1.825989
Percentile Bootstrap UCL	1.723611
BCA Bootstrap UCL	1.863889
95% Chebyshev (Mean, Sd) UCL	2.436748
97.5% Chebyshev (Mean, Sd) UCL	2.927418
99% Chebyshev (Mean, Sd) UCL	3.891244

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

hexane

Data File

Variable: Hexane

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	14
Minimum	0.55
Maximum	11
Mean	1.630556
Median	0.6
Standard Deviation	2.025385
Variance	4.102183
Coefficient of Variation	1.242144
Skewness	3.196527

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.591219
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)

Student's-t UCL 2.200894

Gamma Statistics

k hat	1.290372
k star (bias corrected)	1.201359
Theta hat	1.263632
Theta star	1.357259
nu hat	92.90678
nu star	86.49788
Approx.Chi Square Value (.05)	66.05473
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	65.24339

Gamma Distribution Test

A-D Test Statistic	4.236738
A-D 5% Critical Value	0.770565
K-S Test Statistic	0.362535
K-S 5% Critical Value	0.15024

Data do not follow gamma distribution

at 5% significance level

95% UCLs (Assuming Gamma Distribution)

Approximate Gamma UCL	2.135193
Adjusted Gamma UCL	2.161745

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.743178
Shapiro-Wilk 5% Critical Value	0.935
Data not lognormal at 5% significance level	

95% Non-parametric UCLs

CLT UCL	2.185799
Adj-CLT UCL (Adjusted for skewness)	2.377959
Mod-t UCL (Adjusted for skewness)	2.230868
Jackknife UCL	2.200894
Standard Bootstrap UCL	2.183269
Bootstrap-t UCL	2.574377
Hall's Bootstrap UCL	4.430557
Percentile Bootstrap UCL	2.206944
BCA Bootstrap UCL	2.448611
95% Chebyshev (Mean, Sd) UCL	3.101963
97.5% Chebyshev (Mean, Sd) UCL	3.738643
99% Chebyshev (Mean, Sd) UCL	4.989276

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

mtbe

Data File		Variable: Methyl tert-butyl ether
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statisticic
Number of Unique Samples	5	0.324916
Minimum	0.55	Shapiro-Wilk 5% Critical Value
Maximum	2.45	0.935
Mean	0.663889	Data not normal at 5% significance level
Median	0.6	95% UCL (Assuming Normal Distribution)
Standard Deviation	0.336285	Student's-t UCL
Variance	0.113087	0.758585
Coefficient of Variation	0.506537	Gamma Distribution Test
Skewness	4.832391	A-D Test Statistic
Gamma Statistics		8.676228
k hat	9.020073	A-D 5% Critical Value
k star (bias corrected)	8.286918	0.748585
Theta hat	0.073601	K-S Test Statistic
Theta star	0.080113	0.425229
nu hat	649.4452	K-S 5% Critical Value
nu star	596.6581	0.146864
Approx.Chi Square Value (.05)	540.9856	Data do not follow gamma distribution
Adjusted Level of Significance	0.0428	at 5% significance level
Adjusted Chi Square Value	538.5868	95% UCLs (Assuming Gamma Distribution)
Log-transformed Statistics		Approximate Gamma UCL
Minimum of log data	-0.597837	0.732209
Maximum of log data	0.896088	Adjusted Gamma UCL
Mean of log data	-0.466095	0.73547
Standard Deviation of log data	0.280213	Lognormal Distribution Test
Variance of log data	0.078519	Shapiro-Wilk Test Statisticic
		0.421438
		Shapiro-Wilk 5% Critical Value
		0.935
		Data not lognormal at 5% significance level
RECOMMENDATION		95% Non-parametric UCLs
Data are Non-parametric (0.05)		CLT UCL
Use Student's-t UCL		0.756079
or Modified-t UCL		Adj-CLT UCL (Adjusted for skewness)
		0.804312
		Mod-t UCL (Adjusted for skewness)
		0.766108
		Jackknife UCL
		0.758585
		Standard Bootstrap UCL
		0.757508
		Bootstrap-t UCL
		1.413917
		Hall's Bootstrap UCL
		1.294792
		Percentile Bootstrap UCL
		0.769444
		BCA Bootstrap UCL
		0.822222
		95% Chebyshev (Mean, Sd) UCL
		0.908194
		97.5% Chebyshev (Mean, Sd) UCL
		1.013905
		99% Chebyshev (Mean, Sd) UCL
		1.221554

MethylCl₂

Data File		Variable: Methylene Chloride	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.425926
Number of Unique Samples	10	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	13		
Mean	1.679167	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	2.528569
Standard Deviation	3.016393		
Variance	9.098625		
Coefficient of Variation	1.796363	Gamma Distribution Test	
Skewness	3.274389	A-D Test Statistic	7.72061
Gamma Statistics		A-D 5% Critical Value	0.780179
k hat	0.916946	K-S Test Statistic	0.438632
k star (bias corrected)	0.859052	K-S 5% Critical Value	0.151642
Theta hat	1.83126	Data do not follow gamma distribution at 5% significance level	
Theta star	1.954673		
nu hat	66.02011	95% UCLs (Assuming Gamma Distribution)	
nu star	61.85176	Approximate Gamma UCL	2.320383
Approx.Chi Square Value (.05)	44.75961	Adjusted Gamma UCL	2.355158
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	44.09871	Lognormal Distribution Test	
Log-transformed Statistics		Shapiro-Wilk Test Statistic	0.580296
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value	0.935
Maximum of log data	2.564949	Data not lognormal at 5% significance level	
Mean of log data	-0.117795		
Standard Deviation of log data	0.894044	95% UCLs (Assuming Lognormal Distribution)	
Variance of log data	0.799315	95% H-UCL	1.870208
		95% Chebyshev (MVUE) UCL	2.266566
		97.5% Chebyshev (MVUE) UCL	2.682307
		99% Chebyshev (MVUE) UCL	3.498951
RECOMMENDATION		95% Non-parametric UCLs	
Data are Non-parametric (0.05)		CLT UCL	2.506087
Use 95% Chebyshev (Mean, Sd) UCL		Adj-CLT UCL (Adjusted for skewness)	2.799242
		Mod-t UCL (Adjusted for skewness)	2.574295
		Jackknife UCL	2.528569
		Standard Bootstrap UCL	2.473211
		Bootstrap-t UCL	3.670139
		Hall's Bootstrap UCL	3.215659
		Percentile Bootstrap UCL	2.5875
		BCA Bootstrap UCL	2.934722
		95% Chebyshev (Mean, Sd) UCL	3.870525
		97.5% Chebyshev (Mean, Sd) UCL	4.818728
		99% Chebyshev (Mean, Sd) UCL	6.681288

propylbenz

Data File		Variable: Propylbenzene	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.39409
Number of Unique Samples	6	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	2.45		
Mean	0.698611	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	0.807073
Standard Deviation	0.385169		
Variance	0.148355		
Coefficient of Variation	0.551335	Gamma Distribution Test	
Skewness	3.706088	A-D Test Statistic	8.642248
Gamma Statistics		A-D 5% Critical Value	0.749381
k hat	6.873766	K-S Test Statistic	0.440011
k star (bias corrected)	6.31947	K-S 5% Critical Value	0.147045
Theta hat	0.101634	Data do not follow gamma distribution	
Theta star	0.110549	at 5% significance level	
nu hat	494.9111	95% UCLs (Assuming Gamma Distribution)	
nu star	455.0019	Approximate Gamma UCL	0.781898
Approx.Chi Square Value (.05)	406.5355	Adjusted Gamma UCL	0.785907
Adjusted Level of Significance	0.0428	Lognormal Distribution Test	
Adjusted Chi Square Value	404.4618	Shapiro-Wilk Test Statistic	0.4695
Log-transformed Statistics		Shapiro-Wilk 5% Critical Value	0.935
Minimum of log data	-0.597837	Data not lognormal at 5% significance level	
Maximum of log data	0.896088	95% Non-parametric UCLs	
Mean of log data	-0.433161	CLT UCL	0.804202
Standard Deviation of log data	0.329608	Adj-CLT UCL (Adjusted for skewness)	0.846571
Variance of log data	0.108641	Mod-t UCL (Adjusted for skewness)	0.813682
RECOMMENDATION		Jackknife UCL	0.807073
Data are Non-parametric (0.05)		Standard Bootstrap UCL	0.799505
Use Student's-t UCL or Modified-t UCL		Bootstrap-t UCL	0.950849
		Hall's Bootstrap UCL	0.832138
		Percentile Bootstrap UCL	0.811111
		BCA Bootstrap UCL	0.865278
		95% Chebyshev (Mean, Sd) UCL	0.97843
		97.5% Chebyshev (Mean, Sd) UCL	1.099508
		99% Chebyshev (Mean, Sd) UCL	1.337342

Data File		Variable: Styrene
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statisticic
Number of Unique Samples	7	Shapiro-Wilk 5% Critical Value
Minimum	0.55	Data not normal at 5% significance level
Maximum	2.45	
Mean	0.736111	95% UCL (Assuming Normal Distribution)
Median	0.6	Student's-t UCL
Standard Deviation	0.447151	0.862027
Variance	0.199944	
Coefficient of Variation	0.607451	Gamma Distribution Test
Skewness	3.04209	A-D Test Statistic
Gamma Statistics		A-D 5% Critical Value
k hat	5.348635	K-S Test Statistic
k star (bias corrected)	4.921434	K-S 5% Critical Value
Theta hat	0.137626	Data do not follow gamma distribution
Theta star	0.149572	at 5% significance level
nu hat	385.1017	95% UCLs (Assuming Gamma Distribution)
nu star	354.3432	Approximate Gamma UCL
Approx.Chi Square Value (.05)	311.7127	Adjusted Gamma UCL
Adjusted Level of Significance	0.0428	
Adjusted Chi Square Value	309.9021	Lognormal Distribution Test
Log-transformed Statistics		Shapiro-Wilk Test Statisticic
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value
Maximum of log data	0.896088	Data not lognormal at 5% significance level
Mean of log data	-0.402759	
Standard Deviation of log data	0.379848	95% UCLs (Assuming Lognormal Distribution)
Variance of log data	0.144284	95% H-UCL
		95% Chebyshev (MVUE) UCL
		97.5% Chebyshev (MVUE) UCL
		99% Chebyshev (MVUE) UCL
		95% Non-parametric UCLs
		CLT UCL
		Adj-CLT UCL (Adjusted for skewness)
		Mod-t UCL (Adjusted for skewness)
		0.868324
		Jackknife UCL
		Standard Bootstrap UCL
		Bootstrap-t UCL
		Hall's Bootstrap UCL
		Percentile Bootstrap UCL
		BCA Bootstrap UCL
		95% Chebyshev (Mean, Sd) UCL
		97.5% Chebyshev (Mean, Sd) UCL
		99% Chebyshev (Mean, Sd) UCL
RECOMMENDATION		
Data are Non-parametric (0.05)		
Use Student's-t UCL		0.858694
or Modified-t UCL		0.899069
		0.868324
		0.862027
		0.856502
		0.967876
		0.875978
		0.8625
		0.901389
		1.060959
		1.201521
		1.477628

Data File		Variable: Tetrachloroethene	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.482693
Number of Unique Samples	29	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	88		
Mean	9.8625	95% UCL (Assuming Normal Distribution)	
Median	2.55	Student's-t UCL	15.65069
Standard Deviation	20.55498		
Variance	422.5073		
Coefficient of Variation	2.084155	Gamma Distribution Test	
Skewness	2.764642	A-D Test Statistic	4.078366
Gamma Statistics		A-D 5% Critical Value	0.809626
k hat	0.528522	K-S Test Statistic	0.325442
k star (bias corrected)	0.502997	K-S 5% Critical Value	0.154928
Theta hat	18.66054	Data do not follow gamma distribution	
Theta star	19.60749	at 5% significance level	
nu hat	38.05355	95% UCLs (Assuming Gamma Distribution)	
nu star	36.21576	Approximate Gamma UCL	15.23785
Approx.Chi Square Value (.05)	23.44018	Adjusted Gamma UCL	15.5481
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	22.97245	Lognormal Distribution Test	
Log-transformed Statistics		Shapiro-Wilk Test Statistic	0.864326
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value	0.935
Maximum of log data	4.477337	Data not lognormal at 5% significance level	
Mean of log data	1.097161		
Standard Deviation of log data	1.375458	95% Non-parametric UCLs	
Variance of log data	1.891886	CLT UCL	15.49749
RECOMMENDATION		Adj-CLT UCL (Adjusted for skewness)	17.18417
Data are Non-parametric (0.05)		Mod-t UCL (Adjusted for skewness)	15.91378
Use 99% Chebyshev (Mean, Sd) UCL		Jackknife UCL	15.65069
		Standard Bootstrap UCL	15.43473
		Bootstrap-t UCL	20.20295
		Hall's Bootstrap UCL	15.1627
		Percentile Bootstrap UCL	15.79722
		BCA Bootstrap UCL	18.04444
		95% Chebyshev (Mean, Sd) UCL	24.79535
		97.5% Chebyshev (Mean, Sd) UCL	31.2568
		99% Chebyshev (Mean, Sd) UCL	43.94908

tetrahydro

Data File		Variable: Tetrahydrofuran
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statistic
Number of Unique Samples	5	Shapiro-Wilk 5% Critical Value
Minimum	0.55	Data not normal at 5% significance level
Maximum	2.45	
Mean	0.677778	95% UCL (Assuming Normal Distribution)
Median	0.6	Student's-t UCL
Standard Deviation	0.347531	0.775641
Variance	0.120778	
Coefficient of Variation	0.512751	Gamma Distribution Test
Skewness	4.333925	A-D Test Statistic
Gamma Statistics		A-D 5% Critical Value
k hat	8.178358	K-S Test Statistic
k star (bias corrected)	7.515346	K-S 5% Critical Value
Theta hat	0.082875	Data do not follow gamma distribution
Theta star	0.090186	at 5% significance level
nu hat	588.8417	95% UCLs (Assuming Gamma Distribution)
nu star	541.1049	Approximate Gamma UCL
Approx.Chi Square Value (.05)	488.1439	0.751313
Adjusted Level of Significance	0.0428	Adjusted Gamma UCL
Adjusted Chi Square Value	485.8675	0.754833
Log-transformed Statistics		Lognormal Distribution Test
Minimum of log data	-0.597837	Shapiro-Wilk Test Statistic
Maximum of log data	0.896088	Shapiro-Wilk 5% Critical Value
Mean of log data	-0.451317	Data not lognormal at 5% significance level
Standard Deviation of log data	0.301028	
Variance of log data	0.090618	95% UCLs (Assuming Lognormal Distribution)
		95% H-UCL
		95% Chebyshev (MVUE) UCL
		97.5% Chebyshev (MVUE) UCL
		99% Chebyshev (MVUE) UCL
		95% Non-parametric UCLs
		CLT UCL
		Adj-CLT UCL (Adjusted for skewness)
		Mod-t UCL (Adjusted for skewness)
		0.782614
		Jackknife UCL
		Standard Bootstrap UCL
		Bootstrap-t UCL
		Hall's Bootstrap UCL
		Percentile Bootstrap UCL
		BCA Bootstrap UCL
		95% Chebyshev (Mean, Sd) UCL
		97.5% Chebyshev (Mean, Sd) UCL
		99% Chebyshev (Mean, Sd) UCL
RECOMMENDATION		
Data are Non-parametric (0.05)		
Use Student's-t UCL or Modified-t UCL		

toluene

Data File

Variable: Toluene

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	26
Minimum	0.55
Maximum	1000
Mean	43.2
Median	4.9
Standard Deviation	172.3158
Variance	29692.73
Coefficient of Variation	3.988791
Skewness	5.293546

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.264576
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)

Student's-t UCL	91.72332
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Gamma Statistics

k hat	0.310225
k star (bias corrected)	0.302891
Theta hat	139.2538
Theta star	142.6254
nu hat	22.3362
nu star	21.80818
Approx.Chi Square Value (.05)	12.193
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	11.86575

Gamma Distribution Test

A-D Test Statistic	5.074098
A-D 5% Critical Value	0.854432
K-S Test Statistic	0.32388
K-S 5% Critical Value	0.159133

Data do not follow gamma distribution	
at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	77.26673
Adjusted Gamma UCL	79.39774

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.893926
Shapiro-Wilk 5% Critical Value	0.935
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	52.51562
95% Chebyshev (MVUE) UCL	49.03013
97.5% Chebyshev (MVUE) UCL	62.24247
99% Chebyshev (MVUE) UCL	88.19554

95% Non-parametric UCLs

CLT UCL	90.43904
Adj-CLT UCL (Adjusted for skewness)	117.5129
Mod-t UCL (Adjusted for skewness)	95.94629
Jackknife UCL	91.72332
Standard Bootstrap UCL	88.51409
Bootstrap-t UCL	868.5891
Hall's Bootstrap UCL	489.0808
Percentile Bootstrap UCL	98.07639
BCA Bootstrap UCL	135.0931
95% Chebyshev (Mean, Sd) UCL	168.3845
97.5% Chebyshev (Mean, Sd) UCL	222.5519
99% Chebyshev (Mean, Sd) UCL	328.9534

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

Data File		Variable: Trichloroethene	
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	36	Shapiro-Wilk Test Statistic	0.396245
Number of Unique Samples	12	Shapiro-Wilk 5% Critical Value	0.935
Minimum	0.55	Data not normal at 5% significance level	
Maximum	19		
Mean	1.677778	95% UCL (Assuming Normal Distribution)	
Median	0.6	Student's-t UCL	2.584987
Standard Deviation	3.221678		
Variance	10.37921		
Coefficient of Variation	1.920205	Gamma Distribution Test	
Skewness	4.754364	A-D Test Statistic	6.398285
Gamma Statistics		A-D 5% Critical Value	0.77766
k hat	0.970967	K-S Test Statistic	0.422643
k star (bias corrected)	0.908572	K-S 5% Critical Value	0.151323
Theta hat	1.727945	Data do not follow gamma distribution	
Theta star	1.846611	at 5% significance level	
nu hat	69.90962	95% UCLs (Assuming Gamma Distribution)	
nu star	65.41715	Approximate Gamma UCL	2.295987
Approx.Chi Square Value (.05)	47.80316	Adjusted Gamma UCL	2.329332
Adjusted Level of Significance	0.0428		
Adjusted Chi Square Value	47.11885	Lognormal Distribution Test	
Log-transformed Statistics		Shapiro-Wilk Test Statistic	0.640684
Minimum of log data	-0.597837	Shapiro-Wilk 5% Critical Value	0.935
Maximum of log data	2.944439	Data not lognormal at 5% significance level	
Mean of log data	-0.079081		
Standard Deviation of log data	0.877191	95% Non-parametric UCLs	
Variance of log data	0.769464	CLT UCL	2.560976
		Adj-CLT UCL (Adjusted for skewness)	3.0156
		Mod-t UCL (Adjusted for skewness)	2.655899
		Jackknife UCL	2.584987
		Standard Bootstrap UCL	2.546193
		Bootstrap-t UCL	4.019351
		Hall's Bootstrap UCL	5.600828
		Percentile Bootstrap UCL	2.675
		BCA Bootstrap UCL	3.147222
RECOMMENDATION		95% Chebyshev (Mean, Sd) UCL	4.018272
Data are Non-parametric (0.05)		97.5% Chebyshev (Mean, Sd) UCL	5.031006
Use 95% Chebyshev (Mean, Sd) UCL		99% Chebyshev (Mean, Sd) UCL	7.020326

mpXylene

Data File		Variable: m,p-Xylene
Raw Statistics		Normal Distribution Test
Number of Valid Samples	36	Shapiro-Wilk Test Statistic
Number of Unique Samples	28	Shapiro-Wilk 5% Critical Value
Minimum	0.55	Data not normal at 5% significance level
Maximum	150	
Mean	10.49861	95% UCL (Assuming Normal Distribution)
Median	3	Student's-t UCL
Standard Deviation	26.17846	17.87034
Variance	685.3116	
Coefficient of Variation	2.493516	Gamma Distribution Test
Skewness	4.716775	A-D Test Statistic
Gamma Statistics		2.406969
k hat	0.544369	A-D 5% Critical Value
k star (bias corrected)	0.517524	0.808076
Theta hat	19.28583	K-S Test Statistic
Theta star	20.28625	0.205331
nu hat	39.19458	K-S 5% Critical Value
nu star	37.2617	0.154763
Approx.Chi Square Value (.05)	24.28417	Data do not follow gamma distribution
Adjusted Level of Significance	0.0428	at 5% significance level
Adjusted Chi Square Value	23.80743	95% UCLs (Assuming Gamma Distribution)
Log-transformed Statistics		Approximate Gamma UCL
Minimum of log data	-0.597837	16.1091
Maximum of log data	5.010635	Adjusted Gamma UCL
Mean of log data	1.199553	16.43168
Standard Deviation of log data	1.372008	
Variance of log data	1.882406	Lognormal Distribution Test
		Shapiro-Wilk Test Statistic
		0.936444
		Shapiro-Wilk 5% Critical Value
		0.935
		Data are lognormal at 5% significance level
RECOMMENDATION		95% Non-parametric UCLs
Data are lognormal (0.05)		CLT UCL
Use H-UCL		17.67523
		Adj-CLT UCL (Adjusted for skewness)
		21.34017
		Mod-t UCL (Adjusted for skewness)
		18.442
		Jackknife UCL
		17.87034
		Standard Bootstrap UCL
		17.50573
		Bootstrap-t UCL
		30.6689
		Hall's Bootstrap UCL
		44.80884
		Percentile Bootstrap UCL
		18.29444
		BCA Bootstrap UCL
		22.50556
		95% Chebyshev (Mean, Sd) UCL
		29.51682
		97.5% Chebyshev (Mean, Sd) UCL
		37.74601
		99% Chebyshev (Mean, Sd) UCL
		53.91067

oXylene

Data File

Variable: o-Xylene

Raw Statistics

Number of Valid Samples	36
Number of Unique Samples	23
Minimum	0.55
Maximum	84
Mean	6.106944
Median	2
Standard Deviation	14.43063
Variance	208.243
Coefficient of Variation	2.362987
Skewness	4.831176

Normal Distribution Test

Shapiro-Wilk Test Statistic	0.409928
Shapiro-Wilk 5% Critical Value	0.935
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)

Student's-t UCL	10.17054
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Gamma Distribution Test

A-D Test Statistic	2.532427
A-D 5% Critical Value	0.804104
K-S Test Statistic	0.196559
K-S 5% Critical Value	0.154342

Gamma Statistics

k hat	0.584982
k star (bias corrected)	0.554752
Theta hat	10.43955
Theta star	11.00842
nu hat	42.11869
nu star	39.94214
Approx.Chi Square Value (.05)	26.4598
Adjusted Level of Significance	0.0428
Adjusted Chi Square Value	25.96051

Lognormal Distribution Test

Shapiro-Wilk Test Statistic	0.882892
Shapiro-Wilk 5% Critical Value	0.935
Data not lognormal at 5% significance level	

Log-transformed Statistics

Minimum of log data	-0.597837
Maximum of log data	4.430817
Mean of log data	0.749222
Standard Deviation of log data	1.315798
Variance of log data	1.731325

95% Non-parametric UCLs

CLT UCL	10.06299
Adj-CLT UCL (Adjusted for skewness)	12.13225
Mod-t UCL (Adjusted for skewness)	10.49331
Jackknife UCL	10.17054
Standard Bootstrap UCL	9.987336

Bootstrap-t UCL	18.64539
Hall's Bootstrap UCL	23.93203
Percentile Bootstrap UCL	10.4
BCA Bootstrap UCL	13.09444
95% Chebyshev (Mean, Sd) UCL	16.59055

97.5% Chebyshev (MVUE) UCL	21.12682
99% Chebyshev (MVUE) UCL	23.93203

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

99% Chebyshev (Mean, Sd) UCL	30.03743
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